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**A FEW POPULAR HARDY FLOWERS MAKE THIS PATHWAY  
A THING OF BEAUTY**

# The Book of Perennials

*By*  
ALFRED C. HOTTES



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## PREFACE TO FIRST EDITION

**I**N the "Garden Guide" many perennial flowers were mentioned, but there has been a demand to know more about them. The catalogs of the commercial growers of perennials should serve as a supplement to this book for they will deal more especially with the varieties. Each grower will carry his own varieties which he has selected for color, size or habit, and as these varieties are being constantly improved the catalogs are invaluable.

An effort has been made to present only the most outstanding perennials, flowers which are either so strong that they almost care for themselves, or so exquisitely charming that they warrant any amount of time in rearing them properly.

The author was assisted by Mrs. Egeva Ohlsen in much of the work involved in compiling this book. He owes a debt to the many garden lovers who have told him their experiences—their successes in culture and propagation. He hopes to enjoy the suggestions of his readers and will welcome their corrections, additions and criticisms.

ALFRED C. HOTTES.

February, 1923

## PREFACE TO THIRD EDITION

**F**IRST published six years ago, this book has undergone the criticism of many thousands of garden lovers. Through the observations on perennials made during this period, it has been possible to add many new hints as to their culture.

The names used are, for the most part, the Standardized Plant Names agreed upon by the American Joint Committee on Horticultural Nomenclature. When several names appear in parentheses, they indicate those in general use but not approved by that Committee. If the reader is desirous of more definite descriptions of herbaceous perennials, he should refer to L. H. Bailey's "Manual of Cultivated Plants."

This book makes no pretext as to botanical precision.

ALFRED C. HOTTES.

June, 1929.

## THE PERENNIAL GARDEN

**P**LANTS which live year after year in the garden are known as perennials. They include some of the old-fashioned flowers such as Peonies, Phloxes and Larkspurs. It is a compliment to a flower to call it "old-fashioned," for that indicates that the flower was popular with our grandparents and was so worth while that we grow them even today. Each nationality coming to our shores has brought with it the old favorites of the ancestral home. Here these flowers have often become veritable weeds. The Eglantine, or Sweetbrier Rose, is thought by many to be a wild Rose, but not so. It was introduced by the English, perhaps even the Pilgrims. Such also is the case with Bouncing-bet, Tansy and the Tawny Daylily. Hundreds of real wild flowers are seldom considered such because they have been in our gardens for years. The Beebalm, Virginia Bluebells, Sneezeweed, and the Blanketflower are examples of native flowers found about our own country in woods and gardens.

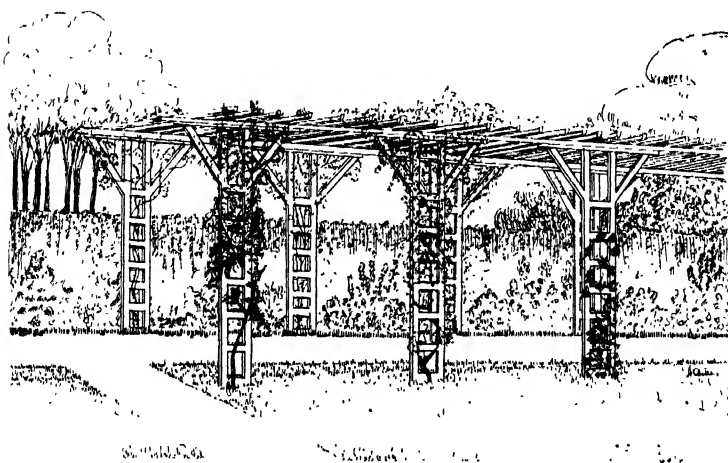
But of the vast array of flowers we should give a little thought to their origin. Someone has greatly admired each of our plants where they have transplanted them from the wild forest, the green meadow, the shelving mountain ledge, the rocky brookside, the watery lowlands or the level prairies. Someone has brought these flowers from flowery Japan, tropic Africa, or from the home woodlot. Many have responded to care, but not a few others have had to be carefully bred. Men have crossed and recrossed these plants, saved their seeds, fondled their offspring, chosen the best, and finally have, perhaps named them for friends or other men whose work or interest in flowers has earned for them this signal honor.

Someone has truly written that the most beautiful gardens are in the mind, not in the soil. The flowers in your own garden are always more interesting than those in the gardens of another. They are the results of your labor; there is the enjoyment of ownership; they are your flowers.

Who is there with a flower garden who does not share these blooms with his neighbor? We should never fear to break up our clumps of plants and give to our friends. Most plants need such division at regular intervals. That garden becomes interesting which is made up

of plants given you by friends; each of these plants deserves careful culture to bring it to such a state of perfection as will indicate your appreciation of your friend, the giver. A pink Larkspur becomes more than a Larkspur—it is a memory of Mrs. Neighbor or Mr. Sharer.

The progressive garden lover should each year add some of the best kinds of plants to his garden. We should note who sells the best, who has contributed to the improvement of your favorite flowers and purchase from them. What are the few cents in initial cost? Some kinds will increase tenfold in a year. Many seedsmen, flower specialists and nurserymen, send you their catalogs year after year at considerable expense. They are anxious to render you every service. They are encouraged to find that their efforts are not in vain and that people are becoming increasingly interested in the better varieties. When you ask for Peony *Thérèse* and Iris *Isoline*, they are pleased. They know that you have passed the stage where “just Peonies and just Iris” are sufficient, because you are inquiring for some of the improved varieties.



An arbor to frame portions of a perennial border. (See page 15)

## PLANNING THE PERENNIAL BORDER

**P**ERENNIALS are ever popular; whole gardens are now planned of one kind alone. They may be tucked in beds in front of the shrubbery; in fact, they are at home in any place except when planted hit-and-miss about a lawn. Formal circular, or half-moon beds are now out of date except as part of the design of a formal garden. Let us then have perennial gardens, masses bordering the lawn areas, rockeries with them, pools encircled by such as appear to make the surroundings more natural.

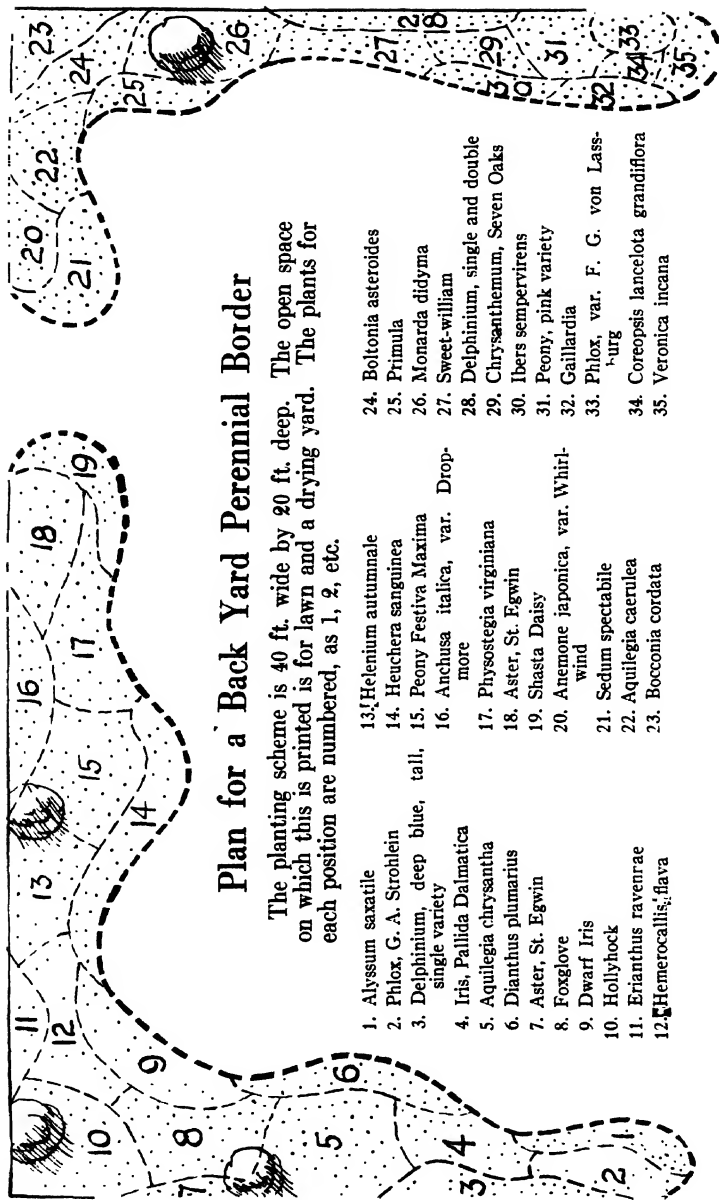
A border may be formal or informal; the plants may be set in definite ribbon-like bands or placed in natural clumps. Generally, the latter method is to be preferred unless we are planning a prim garden of geometrical form on a large estate. Assuming, then, that enough space is available, it is interesting to have two borders separated by a grass, gravel or stone walk. To have the greatest satisfaction the border should be planned on paper. Some persons will say that they are gardeners, not draughtsmen, but no drawing ability is necessary. The idea of sketching is merely to place the plants properly.

### HEIGHTS

Obviously, the tall plants should be at the back of the border, the dwarf edging plants in the front and those of medium height tucked in between the two extremes. Nevertheless, this rule should not be followed too strictly, otherwise the result will give a border which will be too monotonous. Allow bold groups of tall plants to come to the front of the border. For the best effects in the Springtime some of the earliest dwarf plants may be planted toward the center to give a mass of color throughout the width of the border.

### WIDTH

Having mentioned the word "width" it may be said that the border should be at least 4 feet wide; otherwise the grass roots will intrude and rob the flowers. The border may be 12 feet or wider, in which case larger masses of flowers may be planted. Nature produces its flowers in profusion and so must we if our borders are to give us the maximum satisfaction. Good, big eyefuls of color are impressive; little dabs of color seem puny and artificial.



## Plan for a Back Yard Perennial Border

The planting scheme is 40 ft. wide by 20 ft. deep. The open space on which this is printed is for lawn and a drying yard. The plants for each position are numbered, as 1, 2, etc.

- |  |                                      |                                      |
|--|--------------------------------------|--------------------------------------|
| 1. Alyssum saxatile                            | 13. <sup>1</sup> Helenium autumnale  | 24. Boltonia asteroides              |
| 2. Phlox, G. A. Strohlein                      | 14. Heuchera sanguinea               | 25. Primula                          |
| 3. Delphinium, deep blue, tall, single variety | 15. Peony Festiva Maxima             | 26. Monarda didyma                   |
| 4. Iris, Pallida Dalmatica                     | 16. Anchusa italica, var. Drop-more  | 27. Sweet-william                    |
| 5. Aquilegia chrysantha                        | 17. Physostegia virginiana           | 28. Delphinium, single and double    |
| 6. Dianthus plumarius                          | 18. Aster, St. Eugin                 | 29. Chrysanthemum, Seven Oaks        |
| 7. Aster, St. Eugin                            | 19. Shasta Daisy                     | 30. Ibers sempervirens               |
| 8. Foxglove                                    | 20. Anemone japonica, var. Whirlwind | 31. Peony, pink variety              |
| 9. Dwarf Iris                                  | 21. Sedum spectabile                 | 32. Gaillardia                       |
| 10. Hollyhock                                  | 22. Aquilegia caerulea               | 33. Phlox, var. F. G. von Lassburg   |
| 11. Erianthus ravenrae                         | 23. Bocconia cordata                 | 34. Coreopsis lanceolata grandiflora |
| 12. <sup>1</sup> Hemerocallis, flava           |                                      | 35. Veronica incana                  |

## BACKGROUNDS

It is advisable to have a background for our perennials, especially behind the shorter growing sorts. A lattice fence, a border of shrubs or a hedge will serve to set off the colors of the flowers. None but the most robust perennials should be planted directly in front of a hedge or border of shrubs, for the flowers are sure to be robbed of food and moisture. Leave a space of 2 feet between the hedge and the bed of flowers. Shrubs and conifers may be planted here and there in the perennial border to advantage in order to produce bays of tall, green foliage masses. The illustration on page 12 shows various sections of a border framed by the arches of a pergola. When there is a border on both sides of a walk much interest is added by arches across the pathway. There need not be more than one or two in a border 50 feet long. Too many arches would tend to detract from the border of flowers.

## SEASONS

Shall the truth be told or shall the usual advice be given again? The facts are these: it is extremely difficult to plan a border of any size which shall display a neat, tidy appearance and at the same time shall be in bloom from April until frost. There will be unsightly spots where some perennial has passed its season and where the neighboring sorts have failed to cover the traces of the earlier sort. However, it is possible by planning, care and transplanting to maintain such borders of almost uninterrupted bloom.

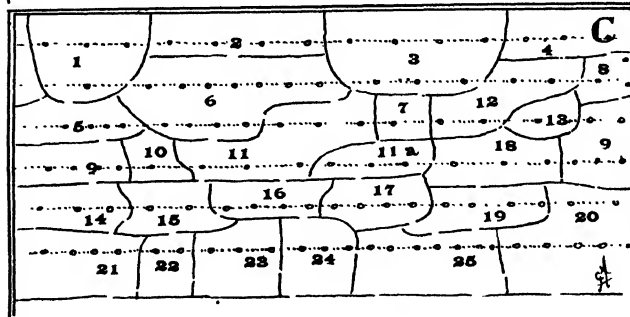
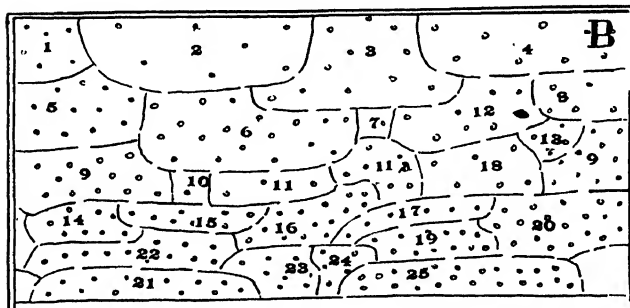
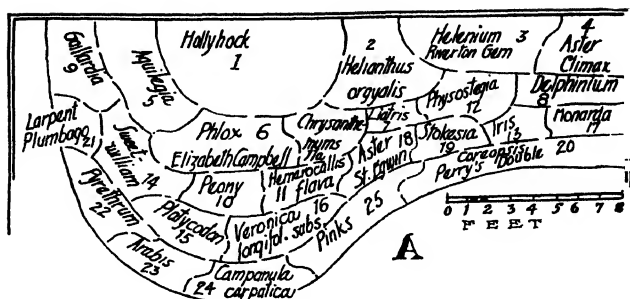
Some persons prefer to have an entire border giving an attractive Spring, Summer or Fall effect; others have pretty spots for each season.

There are optimists, however, who have planted the border for an all-the-year-round effect and who fail to notice the bare spots, so charmed are they by the choice flowers which are at any one time in bloom. They are the same persons who do not say "Every Rose has its thorn"; they say "It is remarkable that some thorns bear Roses."

Relative to seasons it must be said that care should be exercised not to have too many of the early flower sorts toward the front unless they retain their foliage until Fall. It is better to plant certain rather permanent foliage plants as an edging.

## COLOR

The color arrangements in the garden should be pleasing. Is this not a trite statement? And yet what is pleasing to one is a jar to the



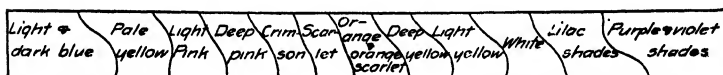
A—Informal outline, plants scattered in groups hit-and-miss throughout the length and breadth. B—A formal outline for the border, plants scattered in groups, as in A. C—a more easily cared for border of perennials. Note that the plants, although in informal groups, are all in line and can be more easily cultivated. This is the advised method. (The numbers used in plans B and C refer to those in plan A.)

taste of another. Rather love flowers and plant a riot of colors than fear to infringe upon good taste by planting sparingly. When the taste improves the plants can be moved.

Color is one of the attributes of objects that adds greatly to our visual enjoyment of them. Forms please us, but it is a more primitive instinct that leads us to appreciate color more than form.

It is a strange fact that most colors are associated in our minds with form. However, blue we conceive without form because we visualize the sky—blue can go on and on without limit. White may be unassociated with a definite shape, inasmuch as snowcapped peaks, Winter landscapes and even the sky filled with clouds is within the experience of all. Night which shrouds the earth, gives no limit to black. But think of red, purple, orange or any other color and immediately a form looms to the mind—a red apple, a purple flower or an orange shawl. These colors give us ideas of pattern always.

The artist studies color; he knows his red, his blue and yellow pigment; he takes what is nearly pure color and mixes it at his will. The prism and the crystal break white light into the colors of the rainbow, or the spectrum. These are pure colors, the component parts of white light.



Succession of colors suggested by D. Lumsden

Flower colors are neither pigment colors nor are they spectrum colors. No flower is pure blue, true red nor can we say accurately what color it is. Look today upon any colored flower in your garden, compare it with your conception of a pure color and it will be seen to contain other colors as well.

More refined tastes appreciate colors which are complex; they glory in the fact that color can no more be expressed in words than can fragrance. They look upon color in a flower and call it violet, but red, yellow, blue, orange, green and purple flashes come from that one violet flower, inasmuch as such flowers are not colored as simply as a cheap vase, an inexpensive calico or a shoddy piece of art.

We pay higher prices for texture in vases, fabrics and paintings than we do for mere color. Texture also plays a large role in flower color; therein lies the charm of one flower over another when colors are alike.

So the Iris enthusiast admires the variety *Flavescens*, but dotes



upon Shekinah, because of its incomparable texture. The wild flower lover enjoys the shining leaves of the Willow and the furry leaf of the Hepatica, but considers the leaf of the Wild Ginger to be the most attractive of any of our native plants because the surface of this leaf is of incomparable texture. Most Roses have the same form, many are similar in color, but the texture of the Hoosier Beauty Rose transcends that of most varieties.

Would that it were easy to give rules for combining flower colors attractively in a garden! But we cannot dogmatically place these colors. How can we truthfully say that we hate magenta, or red?

Combine them properly and they are pleasing. Magenta is a purplish rose; it appears muddy when used with salmon pink or clear pink; it does not offend when used with purple or white. Scarlet is a yellow-red and is not at its best when contrasted with crimson, a blue-red. Light tints of color generally please when combined together, but a light tint of one color combined with a dark shade of another is usually employed to the disadvantage of one of these colors. White is the symbol of purity and the color of snow, but when too much is used in the garden, the latter appears Wintery and out of season. So Spiraea, or Bridalwreath, when used as commonly as it is throughout



A border cut through an orchard. Colors vie with each other and even divert our attention from the building in the background

our country, is less pleasing than any other color. Small spots of orange and yellow are as showy as large clumps of violet or blue.

Read what Wm. Saville says about colors. He was speaking before the Florists' Club of Philadelphia:

"It should be the aim in starting (as you enter the border from either end) to have flowers of light coloring and foliage plants of gray-glaucous or bluish leaf. As one passes to the center the color is allowed to become stronger and stronger, until in the center position we have one strong color vying with another. There is a craze (which I have not seen successfully carried out) to have borders all blue; or graduated from white to pink; to golden; to bronze and up to crimson; but, in my opinion, a mixed border is preferable."

W. J. Potter, of the Parks Department, Toronto, in a paper read before The Canadian Horticultural Association once said:

"Color planting is more suitable for large gardens, where the eye rests on the whole, or greater part of the scheme. It also includes the choice and use of two colors or combinations, such as pink and blue (light), cream and purple, golden yellow and deep blue, or orange and medium blue; or a gradual blending down from an intense color, using several intermediate shades. The yellow and orange shades always look well and if separated in good generous blocks, cannot help but be effective. Blocks of white flowers or green ornamental foliage will act as a foil where it is necessary to use strong colors in heavy masses, reds and scarlets for example, that is if both meet the eye at the same time. The blue Delphiniums, white and pink Hollyhocks afford an example of good tones, but keep the reds and maroons away. Gypsophila and purple Delphinium form an esthetic combination. Place Golden Coreopsis against heavy foliage and deep shadows. Plant Foxgloves among an underground of dwarfier material or among evergreens in groups. The composite flowers offer many delightful combinations. One cannot err in their use, as the colors, for the most part, can be called relative or harmonious. Examples include *Heliopsis* and *Callimeris incisa*, *Stokesia* and *Shasta Daisy*. These can be used also with *Golden Anthemis*. *Rudbeckia purpurea* and *Rudbeckia fulgida* or *subtomentosa* harmonize, and so on 'ad infinitum.' Collections of *Phlox* show off to much advantage if separated as to color, the scarlets from the magentas and the pinks from the purples. Use the white forms between."

Whole books have been written dealing with color in the garden, but these few remarks must suffice. Plan a special color garden if your fancy tells you to do so. In any case, avoid buying mixtures of flower seeds; buy packets of colors which harmonize and make your own mixture. Avoid variegated flowers; they appear muddy in the distance. Study your color combinations for the garden. Combine whatever you admire, but study them, contrasting them, one with the other, until at last you will come to admire certain ones more than others and more than a riot of colors.

Be not discouraged that the garden is difficult to arrange in color harmony; it is only by a realization of this difficulty that you get the true enjoyment of color.

## GARDEN OPERATIONS

**N**OTHING without labor" is the motto of the garden, although it is true that some perennials require but little care. He who loves the garden enough does not think of the labor but remembers only the triumph of having lusty, flowering plants. He prepares his soil properly, realizing that the camouflage of having a good surface soil, but a poor soil beneath, fools persons but not plants. He talks little about the bugs; he sprays them.

### PREPARATION OF THE SOIL

Perennials must remain rather permanently in one place and for this reason, if for no other, the soil should be deeply and thoroughly prepared. Usually good soil extends down only about a foot, yet many of our perennials are deep rooting. For example, the leguminous and the mallow plants prefer to strike downward. Most of our plants will suffer less from drought in Midsummer if the roots are in the cool, moisture-laden soil beneath. Therefore, dig the soil out to a depth of 18 to 24 inches and incorporate some well rotted manure into the dead subsoil.

The various members of the Heath family which includes Rhododendrons, Azaleas, Mountain-laurel, Trailing-arbutus, and Andromedas, prefer an acid soil. If these plants are to be grown in a limestone region, the soil must be treated to produce an acid condition. Dig out the beds to a good depth and fill with silica sand mixed with acid-producing organic matter, like tanbark or sawdust. Further acidification can be secured by applying aluminum sulphate as needed. Edward Gillette advises frequent watering of the beds with one part of commercial tannic acid to 50 parts of water.

### PLANTING

Some say it is best to prepare the border in the Fall, leaving the soil rough and subject to the freezing action during the Winter, after which it may be leveled and planted in the Spring.

Sweeping statements cannot be made about such diverse plants as are here discussed, but it would seem that with the exception of

the most tender sorts, early Fall planting is advisable. There is not as much to be done in the garden in the Fall. The plants, if transferred early enough, will become thoroughly established by Spring and will start into growth earlier and produce stronger root systems which should enable them to withstand drought. In Autumn the soil works more easily than in Spring, and retaining its Summer warmth, induces root action. Another point worthy of consideration is the fact that many times the nurseries are unable to supply us with just what we want if we order too late in Spring, as they frequently are sold out of popular varieties. Late Fall planting is to be avoided because the plants should be thoroughly established before freezing, as resting plants do not take hold of the soil.

In the descriptions of the perennials found in this little book the best time for transplanting is usually given. The plants with ever-green foliage are usually best moved in Spring, as are also the late-flowering and less hardy sorts.

Notable exceptions of plants which are *not* transplanted in Fall are:

ANEMONE JAPONICA	CHRYSANTHEMUM. Late flowered
ASTER	sorts
CERATOSTIGMA (Plumbago)	HELENIUM (Sneezeweed)
CHRYSANTHEMUM (Shasta Daisy)	MONARDA (Beebalm)

## NOURISHMENT FOR PLANTS

Plants feed from air as well as soil, but it is within our power to improve the soil nourishment only. It is generally agreed that the physical condition of the soil is more important than its actual chemical nature. A soil in good physical condition is well supplied with decayed manure and is fibrous. It is easily worked and is teeming with bacteria which work to release the plant food which most soil contains. The big function of manure added to soil is to give the soil a good texture and assist in releasing its hidden chemical resources. The three main chemicals needed by plants are nitrates, phosphoric acid and potash. Unless these elements are soluble in water they are not available to the plants. Much of the value of fertilizers is to unlock these elements.

**LIME NOT A FERTILIZER.** The value of lime to soil is not that it adds plant food, but that it combines with other substances and becomes useful to plants. It is of great value for other reasons as well; it makes heavy soils looser, it makes sandy soils more compact, it sweetens sour soils and it increases the number of bacteria. There are few gardens which have been cultivated for a period of years that would not benefit by an application of lime every three or four years.

**NITROGEN FERTILIZERS.** Animal manures contain nitrogen and are generally beneficial to soils. Well decayed manure is usually advised because plant roots are frequently injured by contact with fresh manure. Manure used as a Winter mulch may be worked into the soil in the Spring, or manure may be placed in water and the manure water may be applied to the plants.

Nitrate of soda, ammonium sulphate and such nitrate fertilizers are strong drugs for plants. They add nothing to the physical condition of the soil but do supply a large quantity of nitrogen. Nitrogen causes growth and larger flowers. These chemical fertilizers are dissolved in water and applied to plants while they are growing. Too much nitrogen causes excessive growth, delayed flowering and weak-stemmed plants. These chemical nitrogen fertilizers may be applied at the rate of one teaspoon to a gallon of water to make plants greener, more rapid in growth and to increase the size of the flowers; use for this purpose when the plants come into bud. Do not apply too strong nor get the solution upon the leaves of the plants. Remember that it is a drug and should be used accordingly.

**BONEMEAL.** Bonemeal is one of the best general fertilizers for flowers because it contains not only nitrogen but phosphorus. It is useful for all sorts of flowers and may be scattered over the soil so that it is white. Cultivate this into the soil and the value of this fertilizer will last through the season. There is no danger in applying too much.

**WOOD ASHES.** The third great element, potash, is found in abundance in unleached wood ashes. Most soils contain quite enough potash, but if one has some wood ashes it may be used with benefit about the flower garden. A light covering of the soil, hoed in, will be sufficient.

## CULTIVATION

Perennials usually pay us for care by producing larger blooms borne more continuously throughout the season. Few plants do well in soil which is allowed to bake in a stiff crust at the surface of the soil. It is well to cultivate them with a hoe or small tool in such a way that a loose layer of soil surrounds each plant. Air enters the soil, the roots strike more deeply, the weeds are kept in check and less water need be applied to the plants when there is, what the gardener calls, a dust mulch about the plants.

In lieu of cultivation a mulch of manure or lawn clippings may be placed around the plants.

## WATERING

If the soil is properly prepared and cultivated, water is only needed in the perennial garden during the most severe droughts. Many plants may be encouraged to bloom a second time if they are watered thoroughly and fertilized. Water plants leisurely, giving each clump a good, long drink. Merely wetting the surface soil is injurious to the plants because it coaxes the roots to the surface soil and makes them susceptible to the hot sun which will parch these feeding roots. Furthermore, the benefits of cultivation are destroyed by daily sprinkling the surface of the soil.

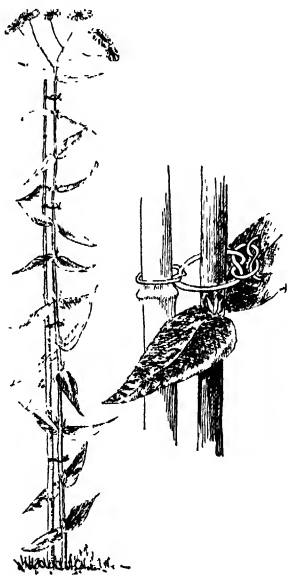
## STAKING

The taller and more slender growing plants need stakes. Too commonly we note stakes in greater evidence than plants. Make them inconspicuous by painting them green, and place them in the centers of the clumps so that the growth may appear perfectly natural, not bundled. Lower growing perennials, such as *Achillea The Pearl*, which are apt to sprawl about the garden, are best supported by placing twiggy branches of shrubs and trees among the plants into which the shoots may grow.

No garden is quite as pretty as it should be when the plants need stakes and do not have them or when the method of supporting the plants is artificial in appearance.

## SEED PODS AND WITHERED FLOWERS

The hardest work a plant performs is to produce seed, and so it is ever wise to prevent seeding, thereby continuing the season of bloom. The wise method is to burn the old flowers as they harbor thrips, a minute insect which destroys the beauty of many flowers. Besides this matter of economizing the strength of the plants, gardens going to seed are untidy; they show want of care.



Staking perennials. Note the method of tying the heavy cord

down

## PROTECTION

Four factors are accountable for the winterkilling of perennials and the main one is not the extreme cold. Many will recall a poem by Robert Frost entitled "Goodbye and Keep Cold." It is addressed to his young orchard. The ideal protection keeps the soil cold. Obviously, plants are not protected to keep them from freezing. Drying winds are especially detrimental to those which hold their foliage through the Winter. Water standing upon the crown will kill most perennials. The alternate freezing and thawing of the soil will cause much damage, because it causes them to be lifted from the soil. Plants are often more injured in the regions of mild Winters than where the soil becomes covered with snow which remains until Spring. Especially is this true of plants set too late or of those plants having few fibrous roots.

Except when diseases are rampant in the garden, the tops of the plants should not be removed until Spring because they tend to protect the plants by catching the snow. Leaves are frequently used as a protecting material but they are harmful and actually smother the plants. Evergreen plants, Sweet-williams, Hollyhocks and such plants, are easily protected if evergreen boughs are used. Remember that plants need a parasol as much as they do an overcoat. Manure serves as a good protection, but is rather expensive compared to its value. However, it should be well decayed or strawy, not lumpy and compact. It is also advisable to use some corn stalks or tree branches upon the beds; then apply the manure or leaves.

The protection is best applied *after* the ground is frozen. The plants will then remain frozen. A mulch applied too early will cause the perennials to make a soft growth during the warm days of the Fall. Often mice will work into the beds when mulch is applied too early.

Many of the more tender perennials are best removed to cold-frames for the Winter. This is especially necessary for some plants growing in the perennial border but which are true rockery subjects. Perennials which are not hardy cannot be made so by any sort of protection.

More perennials are injured by the cold in Spring than are affected by the cold in Winter. It is well to loosen but not remove the mulch on the warm days of early Spring. Take off the mulch when the day of the last killing frost is passed. There is always a freeze following what is apparently Spring-to-stay. Do not think that Summer is nigh just because the Hepaticas have bloomed.

Certain truly hardy perennials need no protection, providing that

they are thoroughly established in the soil. In this class should be placed such hardy subjects as:

AQUILEGIA  
ASTER  
CENTAUREA  
COREOPSIS

DELPHINIUM  
DICTAMNUS  
HOSTA (Funkia)  
HELIANTHUS  
IRIS

LILY-OF-THE-VALLEY  
PEONIES  
PHLOX  
PHYSOSTEGIA

The following plants are apt to be injured in some gardens and should, therefore, benefit by having some protection:

ALTHAEA (Hollyhock)  
ANCHUSA (Bugloss)  
ANEMONE (Japanese A.)  
ASTILBE  
AUBRIETIA (Purple Rockcress)  
ECHINACEA (Purple Coneflower)  
GAILLARDIA (Blanketflower)  
HELENIUM (Sneezeweed)  
HELIANTHEMUM (Sunrose)

IBERIS (Candytuft)  
MONARDA (Beebalm)  
OENOTHERA (Evening-primrose)  
PENTSTEMON (Bearded-tongue)  
PLATYCODON (Balloonflower)  
POTENTILLA (Cinquefoil)  
PRIMULA (Primrose)  
THALICTRUM (Meadowrue)  
VERONICA (Speedwell)

Still more susceptible to Winter injury, and, therefore, best placed in a coldframe:

BELLIS (English Daisy)  
CALLIRHOE (Poppy-mallow)  
CAMPANULA MEDIUM (Canterbury-bells)  
CENTRANTHUS (Greek-valerian)  
CERATOSTIGMA PLUMBAGINOIDES (Larpena Plumbago)  
CHRYSANTHEMUM (Early-flowered sorts)  
CHRYSANTHEMUM MAXIMUM (Shasta Daisy)

CORTADERIA (Pampasgrass)  
DIGITALIS (Foxglove)  
GEUM (Avens)  
HEUCHERA SANGUINEA (Coralbells)  
KNIPHOFIA (Torchlily)  
PENTSTEMON GLOXINIODES (Gloxinia Bearded-tongue)  
SALVIA FARINACEA and others (Mealycup Sage)  
THALICTRUM DIPTEROCARPUM (Yunnan Meadowrue)





## INSECTS AND DISEASES

**P**ERNICIOUS, vicious, obnoxious and thoroughly bad are the pests and diseases of our perennial garden. The control of insects and diseases has been mentioned under the plants affected, but here must be stated some general facts and a few standard formulae given for insecticides and fungicides

### INSECTS

Two big groups of insects bother our flowers: Those which chew holes in the leaves, flowers and stems—the caterpillars, “worms,” slugs, cutworms—for such insects stomach poisons are used. The second class will include those which merely pierce through the tissues of plants and suck the juices from them—aphides, lice, leaf hoppers—for these contact insecticides are used. The insect must actually be hit, in which case it is smothered.

An insecticide which kills chewing mouth-part insects does not necessarily kill those with sucking mouth-parts.

### STOMACH POISONS FOR INSECTS WHICH EAT

*Arsenate of Lead.* This is the best one. It comes in powder and paste form and is used at the rate of 1 oz. of paste or  $\frac{1}{2}$  oz. of powder to 1 gal. of water. Apply as a spray. Soap may be added to help the spray to stick to the plants. The powder may be dusted upon the infested plants.

*Poison Bait.* For cutworms, grasshoppers and insects which are difficult to locate, concoct a delicious death bait for them. Mix about a teaspoon of arsenate of lead, a tablespoon of molasses and a little water to each handful of wheat bran. Place a tablespoonful here and there about the garden just before dark to kill cutworms. There is no danger of killing birds with the bran if it is placed under a shingle or a piece of wood where they cannot reach it.

### CONTACT INSECTICIDES FOR INSECTS WHICH SUCK

*Nicotine Extract.* Nicotine is death to the Rose lice or any other lice or sucking insects. It is purchased in a concentrated form and should be used according to the directions upon the container in which

it is purchased. Soap added to the mixture will help it to adhere to the bodies of the insects.

## DISEASES

Plants are diseased when their normal activities are not functioning properly or when they are the prey to fungi and harmful bacteria. The plants most crowded and not growing properly are most seriously affected. Sunlight and proper air circulation are great preventives. Wet seasons favor diseases. Diseases are more easily prevented than cured. It must be remembered that in killing a disease we are confronted with the problem of killing one plant—the disease—without killing the plant affected with this disease. Preventing disease consists in refraining from planting any plant in the same spot year after year; it consists further in the destruction by burning of any part of the diseased plant; together with proper spraying. Spraying with a fungicide may kill the fungus, but it never cures the leaf, flower or stem affected. Its value lies in preventing the spread of the disease to other parts of the plant. The control of fungous diseases depends generally upon the use of copper and sulphur

## FUNGICIDES

*Powdered, or Flowers of Sulphur.* This is useful in controlling mildews, which are surface diseases characterized by a whitish powdery appearance of the plants. If powdered sulphur is placed in a piece of cheesecloth and sifted over the plants early in the morning when the dew is on the plants, mildew can be checked from spreading. The use of sulphur is more effective when the sun comes out on the day of application, because the heat of the sun vaporizes the sulphur. It may be needless to remark that the sulphur in no case should be burned. Burning sulphur is most destructive of plant and animal life.

*Bordeaux Mixture.* Useful for Peony bud rot, Phlox mildew, Hollyhock rust and many other diseases of perennials. It has the bad fault of leaving a bluish white appearance upon the plants. Its use is therefore confined to the early stages of growth and may be sprayed upon the young plants in March even before growth starts and weekly thereafter until they become unsightly. Some persons believe, however, that a slightly white plant is better than a diseased or dead one and always spray with Bordeaux mixture.

Bordeaux mixture may be purchased already prepared. It is most easily handled. The amateur who makes his own loses rather than gains. To make this fungicide we use 1 oz. copper culphate (blue stone)

and a little over 1 oz. of hydrated lime to 1 gal. of water. Dissolve each the lime and the copper sulphate, in a quart of water before mixing the two. It is better to have too much lime than too little.

*Ammoniacal Copper Carbonate.* This is used for the same purpose as Bordeaux mixture but is not quite as effective. It does not leave a precipitate upon the foliage. To make a small quantity, dissolve 5 drams of copper carbonate in as much ammonia as is needed (usually one pint). This stock solution, if bottled, will keep. It is sufficient to make 10 gals. of spray when water is added



## PROPAGATION

ONE of the most fascinating things of a garden is the propagation of our favorites, whereby we may increase the number of plants to be set in other parts of the garden. We always require a few extra plants to fill in bare spots and we must have some young plants to give to our flower loving friends.

Perennials may be easily propagated from seed, division, cuttings and layers.

### SOWING SEED

Annuals are raised from seed because it is the simplest method of raising the plants, and for the same reason some perennials are also grown from seed. However, many perennials are not propagated by this method because they are hybrid in nature and do not come true to the variety. Peonies, Irises, Phloxes and scores of other are failures when grown from seed, except for those who are interested in seeing just what the result might be. Furthermore, it takes a long time to get some perennials to bloom when raised from seed.

Nevertheless, for the scores which are not good, there are hundreds of perennials which are highly successful.

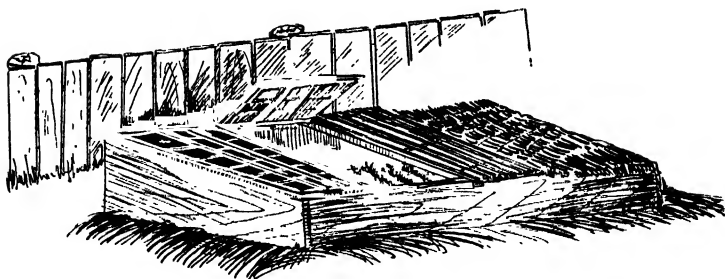
### TIME TO SOW

In order that we may have large plants for our gardens, the seeds are best sown in May, June or July, unless otherwise noted in subsequent notes under the alphabetical list. Certain plants make little growth when sown late; certain others germinate slowly. Gaillardias, Shasta Daisies, Chinese Larkspur, Platycodon, Hibiscus, Iceland Poppy, Lychnis and some other perennials bloom the first year from seed if sown in early Spring; most other perennials do not.

Forget-me-nots, English Daisies, Hollyhocks, Oriental Poppies, Sweet-williams and Pansies are best sown in August, otherwise the plants are apt to become too large for convenient handling in the Spring.

### THE WAY TO SOW

Those persons who would raise perennials from seed should have a coldframe. The well prepared soil in the frame should be several inches



Perennials in a coldframe

above the soil outside the frame so that the frame may have perfect drainage. After sowing the seed thinly in rows it should be covered with sand, leafmold or fine soil, the depth of covering to depend upon the size of the seed. Fine seed should be covered with a piece of burlap but not soil. Large seeds may be safely covered twice their diameter. Water the frame with a sprinkling can. Cover the frame with the sash and shade it with cloth or whitewash. Raise the sash a few inches when the sun is bright. According to the species the seed will germinate in from four days to several months.

### CARE OF SEEDLINGS

Many of the seedlings will be very small but if they are crowded they should be transplanted when they have produced a couple of leaves. Allowing the sash to remain closed during hot weather, keeping them shaded on dull days, and letting the seedlings stand too closely will result in damping-off, a disease very destructive to young seedlings. The smaller sort of seedlings and those of the less hardy species of plants should be transplanted to another part of the frame so that they stand 3 inches to 5 inches apart. The seedlings which are large, rapid growing and hardy may be transplanted to the open soil where they remain for the Winter, providing this is done before September.

The hot days of Summer will necessitate frequent watering of the seedlings. Let the watering be thorough.

### DIVIDING PERENNIALS

Usually perennials are more easily propagated by division than by any other means. This is true of certain of the more rampant growers, especially the hardy Asters, the perennial Sunflowers, Heleniums, Achilleas, Boltonias, Hardy Chrysanthemums, Shasta Daisies and Sweet-williams. Certain other perennials are impatient of being moved

### How to Divide Perennials

A pictorial demonstration of a timely process, showing how a clump of Pyrethrum should be increased to eight plants. Reproduced from Bulletin 170 of the North Dakota Agricultural College with the permission and cooperation of W. C. Palmer, Director of Extension. To the right, before division; below, after division



and seem to thrive for years without being disturbed; namely, Peonies, Gypsophila, Bleedingheart, Lupinus, Papaver, Gasplant, Asclepias, Adonis, and *Anemone japonica*. On the other hand, Phlox, Iris, Columbines, Delphiniums and such other medium-rapid producers should be divided every three or four years, depending upon the appearance of the clumps. Transplant them when the crowns become woody or hollow and the flowers smaller.

Generally speaking, the early flowered sorts should be divided in August and the later blooming plants in the early Spring. It may be advisable to refer to planting Perennials, page 20. Because the new roots of Irises and Peonies are produced in early Fall, it seems wise to transplant these two old favorites during July or August.

Delphiniums require careful manipulation when they are divided, for each division should have a good piece of crown and some roots. Difficult subjects should have the soil washed from the roots, so that the cuts may be made in the proper places.

In dividing perennials it is not necessary that they be separated into extremely small pieces, otherwise their garden value will be destroyed. However, small single-eye divisions may be set about a foot apart to form a good sized clump, in which case the plants usually present the same appearance as before, except that the flowers will be larger.

## LAYERS

A modification of dividing perennials is to prepare them for division by covering the plants with sandy soil or clean sand. It is not necessary to bury the plants, but merely fill in between the spaces where the branches have become long, trailing and leggy. We have in mind especially the Grass Pinks, Sweet-william, *Campanula carpatica* and Arabis.

## CUTTINGS

Few amateur gardeners avail themselves of a method of increasing perennials by cuttings. When certain of the plants are 6 inches or 8 inches tall, the tops may be cut out and placed in a box of sand to root. Cutting back the plants in this way is usually not detrimental to them but causes branching. Care need be exercised that there are several eyes below the cut so that the parent plant can continue its growth. The easiest sorts that may be grown in this way are:

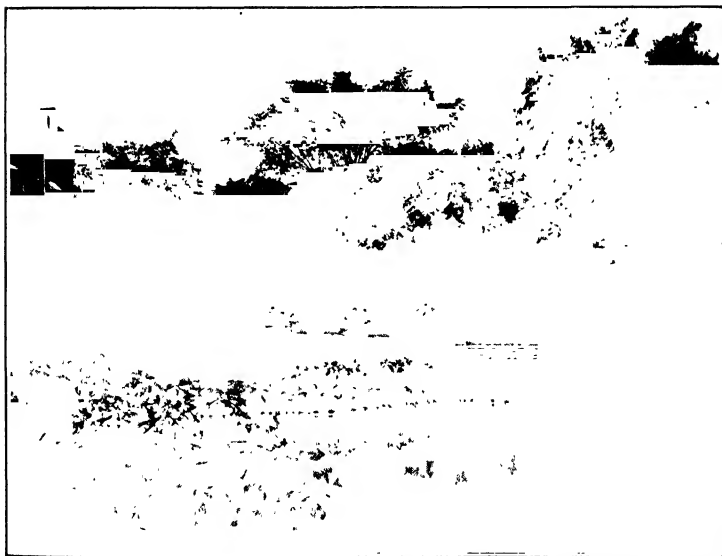
ARABIS	DAHLIA	LYTHRUM
ASCLEPIAS	DELPHINIUM	PERENNIAL SUNFLOWER
CERASTIUM	HELENIUM	PHLOX
CHRYSANTHEMUM	HOLLYHOCK	PINKS
CLEMATIS	IBERIS	POTENTILLA
	LOBELIA	

## FOR SHADY PLACES

**I**N every garden there is some shady spot in which we try to grow flowers. Lists might be suggested which would include certain plants which prefer shade, or those which tolerate shade, or those which prefer shade but an abundance of moisture, or those which require sun in early Spring, but which may be shaded later in the year by surrounding plants which grow and overtop these Spring flowers.

It must be noted, however, that few plants will grow in dense shade; sun for a part of the day seems necessary for obtaining blooms.

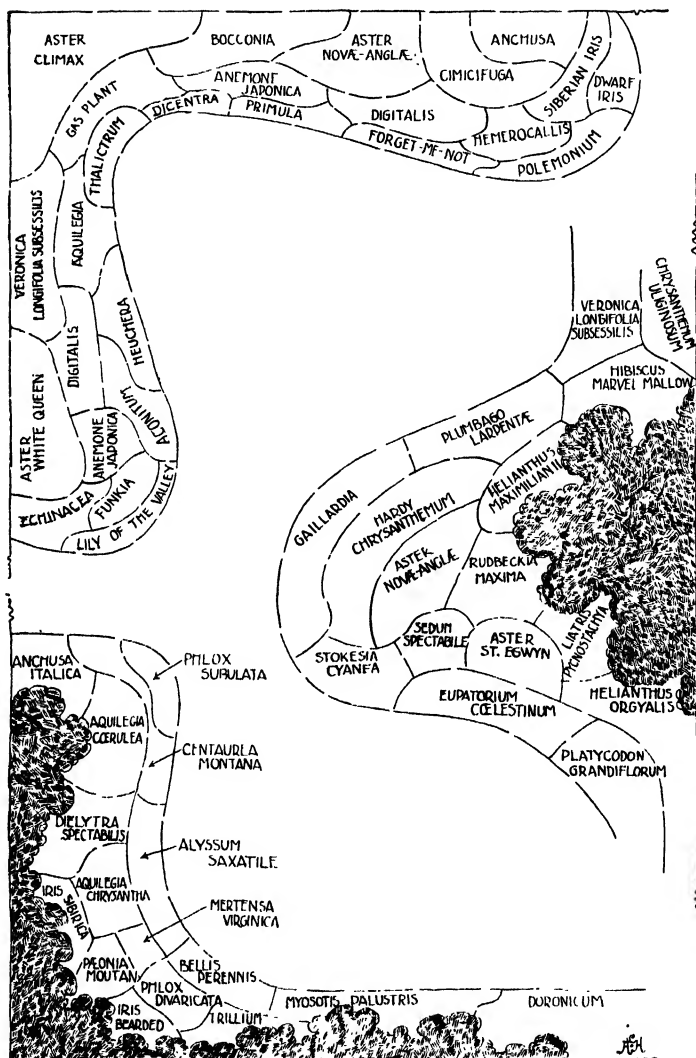
Usually shade is accompanied by poor, very dry soil, due to the presence of trees which drink up every drop of available moisture. Beech, Elm, Maple and other surface-rooting trees are the worst offenders. Oak and Hickory roots go deeper and there is usually less



**Plantainlilies about a pool. These flowers are especially attractive in shady places. (See page 33)**



## THE BOOK OF PERENNIALS



Attractive groupings of perennials; upper section, a shady corner; lower section, a Spring corner; center section, a group of plants of hearty character blooming in the late Summer and Fall.

trouble in growing plants beneath them. Because we are laboring under these difficulties, it is wise to remove some of the surface roots and prepare the soil thoroughly.

## GARDEN FLOWERS FOR SHADY PLACES

- \*Dry soil  
 †Average moist soil.  
 ¶Boggy, very moist soil.  
 oPartial shade.  
 xGround cover in rough places.
- aAcid soil (See page 20).  
 xxGood, refined ground cover.  
 —Spring flowering native plants, which deserve a place in the garden.
- ‡oANEMONE, JAPANESE (*Anemone japonica*). White, pink.  
 †\*oASTER, HARDY (*Aster*, various). Purple, white.  
 ‡oBALLOONFLOWER, CHINESE (*Platycodon grandiflorum*). Blue, white.  
 ¶‡oBEEBALM (*Monarda*, various). Scarlet, purple.  
 \*o-BLACK-EYED-SUSAN (*Rudbeckia*, several). Yellow, dark center.  
 ‡oBLEEDINGHEART (*Dicentra eximia* and *spectabilis*). Carmine.  
 \*xxBUGLE (*Ajuga*, various). Purple, pink.  
 ‡oBUGLOSS (*Anchusa italica*). Deep blue.  
 \*oCANDYTUFT (*Iberis sempervirens*). White.  
 \*—CARDINALFLOWER (*Lobelia cardinalis*). Cardinal.  
 \*—COLUMBINE (*Aquilegia*, various). Various.  
 \*oCRANESBILL (*Geranium sanguineum*). Rosy purple.  
 \*CORALBELLS (*Heuchera sanguinea*). Coral, white.  
 ‡oCOWSLIP, ENGLISH (*Primula*, various). Various.  
 \*oDAYLILY, LEMON (*Heemerocallis flava*). Lemon.  
 \*o-EVENING-PRIMROSE, MISSOURI (*Oenothera missouriensis*). Yellow.  
 ¶—FORGET-ME-NOT (*Myosotis palustris*). Light blue.  
 ‡oFOXGLOVE (*Digitalis purpurea*). Lavender rose.  
 ‡oGASPLANT (*Dictamnus albus*). Rosy purple, white.  
 \*‡oGAYFEATHER, CATTAIL (*Liatris pycnostachya*). Rosy purple.  
 \*GLOBEFLOWER (*Trollius europaeus*). Golden yellow.  
 \*GOLDENROD (*Solidago caesia* and others). Yellow.  
 \*xxGOUTWEED (*Aegopodium*). Variegated leaves.  
 ‡ or \*—HAREBELL (*Campanula rotundifolia*). Blue.  
 ‡¶—JOE-PYE-WEED (*Eupatorium purpureum*). Rosy purple.  
 ‡xxLILY-OF-THE-VALLEY (*Convallaria majalis*). White.  
 ‡¶oLOOSESTRIPE, PURPLE (*Lythrum salicaria*). Purple.  
 ‡oMALTESE CROSS (*Lychnis chalcedonica*). Scarlet.  
 ‡\*—MEADOWRUE (*Thalictrum*, various). Purplish white.  
 ‡MONKSHOOD (*Aconitum*, various). Violet, yellow, white.  
 xx‡—MOSS, PHLOX (*Phlox subulata*). Rosy lavender.  
 ‡oPANSY (*Viola tricolor*). Various.  
 ‡oPEA, PERENNIAL (*Lathyrus latifolius*). Rose, white.  
 \*oPHEASANTS-EYE (*Adonis*, various). Yellow.  
 ‡oPLANTAINLILY (*Hosta* or *Funkia subcordata* and others). Purple, white.  
 ‡oROSE CAMPION (*Lychnis coronaria*). Bright rose.  
 ‡¶oROSEMALLOW (*Hibiscus moscheutos*), various.  
 ‡oST. JOHNSWORT (*Hypericum*, various). Yellow.  
 \*xxSPEEDWELL (*Veronica rupestris*). Violet.  
 \*SPIREA (*Spiraea aruncus*). White.

- \*oSPIREA (*Spiraea palmata*). Crimson.
- \*xxSPURGE, MOUNTAIN (*Pachysandra terminalis*). White.
- xx†oSTONECROP (*Sedum*, various). Yellow, pink, white.
- †-SWEET-WILLIAM, WILD (*Phlox divaricata*). Lavender.
- †oTORCHLILY (*Kniphofia aloides*). Bright orange scarlet.
- o-TRILLIUM (*Trillium*, various). White, red.
- o†-VIOLET (*Viola*, various). Purple, yellow, white.
- †oVIRGINIA BLUEBELLS (*Mertensia virginica*). Blue.
- †oWOODRUFF, SWEET (*Asperula odorata*). White.

### SPRING WILD FLOWERS



*Tiarella cordifolia*, the Foamflower

A characteristic of the once wooded areas of our country is the unending display of Spring flowers. Some persons have wondered why we have many more wild Spring flowers than Summer blooms. These dainty gems must hasten to produce their blossoms before the trees overhead shade them too much. Most of this class of plants do not retain their foliage through the season and actually disappear from view in June or July.

Faults they have but the fleeting character of their display is a charm rather than a fault.

### CULTIVATION OF WILD FLOWERS

If space allows, wild flowers are of unusual charm in the home grounds. Many sorts have short blooming seasons. They often die down to the soil and the foliage effect is not lasting. This is especially true of the Spring flowers. Rather than try to dig these plants from

the wild, it is frequently wiser to order the plants from some specialist, inasmuch as plants purchased from these commercial concerns will often be better rooted. If quantities are wanted, it is cheaper to buy plants than to dig them from the woods. Surely a hundred plants would cost less than the automobile trip and the time.

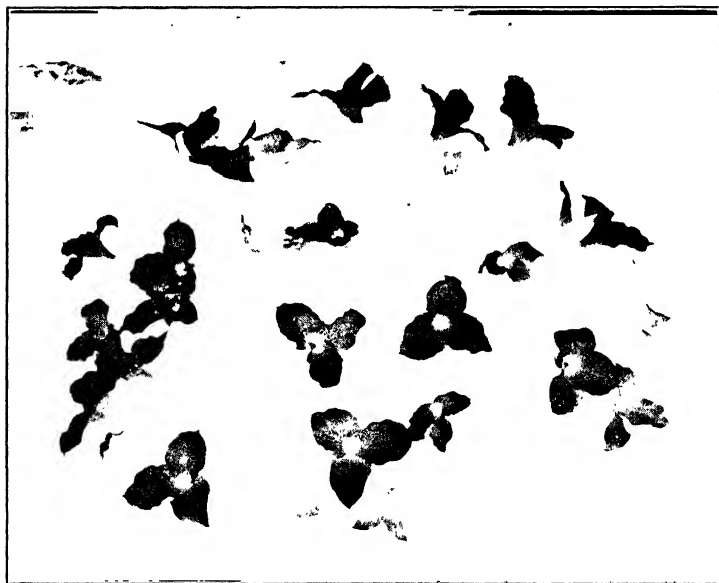
In planting any of these flowers study the conditions under which they grow naturally; the nearer you can imitate these conditions, the greater chance of success.

Most of the forest flowers will require a quantity of leafmold, whereas the prairie and meadow flowers require but ordinary good soil. Transplant in earliest Spring or else wait until September or November. Severely cut back plants set at any other season. Plants collected may usually have the soil shaken from the roots after which they are wrapped in damp moss.

Following is a list of Spring blooming native plants which require the sun in Spring but which will tolerate shade in Summer. Excellent for naturalizing:

†	ANEMONE, WOOD.....	<i>Anemone quinquefolia</i>
	BANEERRY.....	<i>Actaea rubra</i> and <i>alba</i>
†	BELLWORT, MERRYBELLS.....	<i>Uvularia grandiflora</i>
a	† BISHOPSCAP, COMMON.....	<i>Mitella diphylla</i>
†xxo	BLOODROOT.....	<i>Sanguinaria canadensis</i>
a	† BLUEBEAD.....	<i>Clintonia borealis</i>
	† BLUE-EYED-GRASS.....	<i>Sisyrinchium angustifolium</i>
	† BLUET.....	<i>Houstonia coerulea</i>
a	BUNCHBERRY.....	<i>Cornus canadensis</i>
	† COHOSH, BLUE.....	<i>Caulophyllum thalictroides</i>
x	† COLTSFOOT, COMMON.....	<i>Tussilago farfara</i>
	CRINKLEROOT.....	<i>Dentaria diphylla</i>
a	CROWBERRY.....	<i>Empetrum nigrum</i>
a	DALIBARDA.....	<i>Dalibarda repens</i>
a	† DUTCHMANS-BREECHES.....	<i>Dicentra cucullaria</i>
	† FALSE SOLOMONSEAL.....	<i>Smilacina racemosa</i>
FERNS:		
†	CHRISTMAS FERN.....	<i>Aspidium acrostichoides</i>
a	† CINNAMON FERN.....	<i>Osmunda cinnamomea</i>
a	† HARTFORD FERN.....	<i>Lygodium palmatum</i>
a	* INTERRUPTED FERN.....	<i>Osmunda claytoniana</i>
a	† LADY FERN.....	<i>Asplenium filixfemina</i>
a	† MAIDENHAIR FERN, AMERICAN.....	<i>Adiantum pedatum</i>
*	POLYPODY, COMMON.....	<i>Polypodium vulgare</i>
a	† ROYAL FERN.....	<i>Osmunda regalis</i>
a	* SENSITIVE FERN.....	<i>Onoclea sensibilis</i>
*	SPLEENWORT, EBONY.....	<i>Asplenium platyneuron</i>
¶a	WALKING FERN.....	<i>Camptosorus rhizophyllus</i>
	FOAMFLOWER, ALLEGHENY.....	<i>Tiarella cordifolia</i>
a	GALAX.....	<i>Galax aphylla</i>
o*	GERANIUM, WILD.....	<i>Geranium maculatum</i>

*GOLDEYE-GRASS (Stargrass).....	<i>Hypoxis hirsuta</i>
uGOLDTHREAD.....	<i>Coptis trifolia</i>
uGRASS-OF-PARNASSUS.....	<i>Parnassia caroliniana</i>
†xGROUNDIVY.....	<i>Nepeta glechoma</i>
a†HEPATICA, ROUNDLOBE.....	<i>Hepatica triloba</i>
a†IRIS, VERNAL.....	<i>Iris verna</i>
†JACK-IN-THE-PULPIT.....	<i>Arisaema triphyllum</i>
o†JACOBS-LADDER.....	<i>Polemonium reptans</i>
a†LILY-OF-THE-VALEY, *WILD.....	<i>Mianthemum canadense</i>
a*LUPINE, SUNDIAL.....	<i>Lupinus perennis</i>
¶MARSHMARIGOLD.....	<i>Callia palustris</i>
MAYAPPLE, COMMON.....	<i>Podophyllum peltatum</i>
x¶†MONEYWORT.....	<i>Lysimachia nummularia</i>
OCONEE-BELLS.....	<i>Shortia galacifolia</i>
ARETHUSA.....	<i>Arethusa bulbosa</i>
GRASS-PINK ORCHID.....	<i>Calopogon pulchellus</i>
LADIES-TRESSES, NODDING.....	<i>Spiranthes cernua</i>
LADYSLIPPER, PINK.....	<i>Cypripedium acaule</i>
"      SMALL YELLOW.....	<i>Cypripedium parviflorum</i>
"      COMMON YELLOW.....	<i>Cypripedium pubescens</i>
"      WHITE.....	<i>Cypripedium candidum</i>
ORCHIS, SHOWY.....	<i>Orchis spectabilis</i>



Trilliums are such attractive flowers that they are fast disappearing from our woods because thoughtless persons pick them

ax	PARTRIDGEBERRY.....	<i>Mitchella repens</i>
a	PEATPINK.....	<i>Silene pennsylvanica</i>
†xx	PERIWINKLE, COMMON.....	<i>Vinca minor</i>
ax	PIPSISSEWA, COMMON.....	<i>Chimaphila umbellata</i>
	POLYGALA, FRINGED.....	<i>Polygala paucifolia</i>
	RATTLESNAKE-PLANTAIN.....	<i>Goodyera pubescens</i>
†	RUE-ANEMONE.....	<i>Anemonella thalictroides</i>
a	SANDMYRTLE, BOX.....	<i>Leiophyllum buxifolium</i>
*	SAXIFRAGE, VIRGINIA.....	<i>Saxifrage virginensis</i>
a	SHINLEAF.....	<i>Pyrola</i> , various
a	SHINLEAF, ONEFLOWER.....	<i>Moneses uniflora</i>
†o	SHOOTINGSTAR, COMMON.....	<i>Dodecatheon meadia</i>
	SOLOMONSEAL, SMALL.....	<i>Polygonatum biflorum</i>
o	†SPIDERWORT, VIRGINIA.....	<i>Tradescantia virginiana</i>
a	†SPRINGBEAUTY, VIRGINIA.....	<i>Claytonia virginica</i>
†	†SQUIRRELCORN.....	<i>Dicentra canadensis</i>
a	STARFLOWER, AMERICAN.....	<i>Trientalis americana</i>
a	†TRILLIUM.....	<i>Trillium</i> , various
a	†TROUTLILY, COMMON.....	<i>Erythronium americanum</i>
†	†TURTLEHEAD, WHITE.....	<i>Chelone glabra</i>
a	TWINFLOWER, AMERICAN.....	<i>Linnaea borealis, americana</i>
†	TWINLEAF.....	<i>Jeffersonia diphylla</i>
†	VIOLET.....	<i>Viola</i> , various
oxx	†WATERLEAF.....	<i>Hydrophyllum</i> , various
a	†WILDGINGER, CANADA.....	<i>Asarum canadense</i>
	WINDFLOWER.....	<i>Anemone</i> , various
a	WINTERGREEN.....	<i>Gaultheria procumbens</i>
a	WOODBETONY, EARLY.....	<i>Pedicularis canadensis</i>

## HARDY FERNS

Almost everybody has a spot in the garden around the home which is so shady that very few plants will grow there and consequently these pots are bare eyesores. Have you ever taken a walk through dense, cool green woods and admired the wealth of ferns growing there so luxuriantly, and wished that you could have them around your own home to lend their quiet and cool atmosphere? Most of these ferns can be grown easily if one is willing to give a little attention to their care.

USES. Since most of these ferns require a shady and moist situation, they can be massed along shady, woodland paths, at the edges of ponds or along the sides of streams. Many are good for planting on the north side of houses and as edges for borders. The small ones are almost invaluable for the rock garden or near small artificial waterfalls. In the ordinary garden very pretty effects are gained by planting the early flowering bulbous plants among them, because the fronds of the ferns begin to unfurl very early in Spring. Col- (Continued on page 42)

TABLE OF FERNS, COMMONLY NATIVE OR WORTHY OF CULTIVATION  
(See illustration on opposite page)

Scientific Name	Common Name	Height (In Inches)	Soil Preferred	Sun or Shade	Remarks
<i>Adiantum pedatum</i> .....	Maidenhair Fern.....	8-20	Moist, neutral.....	Shade.....	Keep well drained but medium moist. Buy plants. No. 9a, 9b.
<i>Aspidium</i> (See <i>Dryopteris</i> )		4-8	Rather dry.....	Shade.....	Needs moist atmosphere. Evergreen. Plant shallow.
<i>Asplenium trichomanes</i> ...	Maidenhair Spleenwort.	24-36	Neutral as to acidity.....	Shade.....	Use good soil for good growth.
<i>Athyrium</i> ( <i>Asplenium</i> )		24-36	Not particular.....	Sun or shade.....	Yellow-green leaves. Stems pinkish in Spring.
<i>angustifolium</i> .....	Narrowleaf Spleenwort..	12	Moist, subacid.....	Sun.....	Strange fruiting habit. See No. 3a, b, c.
<i>felix femina</i> .....	Lady Fern.....	Creeping	Moist rocks.....	Dense shade..	Rare. Found on limestone rocks.
<i>Botrychium</i> .....	Grapefern.....	12-24	Moderately moist, said to like lime.....	Shade.....	Very dainty. Produces bulbs on leaves No. 13a, 13b.
<i>Camptosorus rhizophyllus</i>	Walking Fern.....	25-30	Not particular.....	Sun.....	Forms tough sod of roots.
<i>Cystopteris bulbifera</i> .....	Bladderfern.....	12-30	Not particular.....	Shade.....	Evergreen. In planting do not bury the rootstock.
<i>Dennstedtia punctilobula</i> .	Hay-scented Fern.....	12-36	Not particular.....	Shade.....	Lacy fronds. Commonly used by florists.
<i>Dicksonia</i> (See <i>Dennstedtia</i> )		Climbs to 36	Moist, acid.....	Shade.....	Water and keep mulched. No. 2.
<i>Dryopteris marginalis</i> ....	Leather Woodfern.....	6-24	Even dry.....	Sun.....	Spreads rapidly. No. 1a and 1b.
<i>spinulosa</i> .....	Toothed Woodfern.....	72	Moist.....	Shade.....	Do not plant deeply.
<i>Lygodium palmatum</i> .....	Harford Fern.....	48-72	Wet.....	Sun.....	Characterized by black exposed root stock. No. 7a.
<i>Onoclea sensibilis</i> .....	Sensitive Fern.....	36	Any.....	Sun or shade..	Successfully cultivated with ease. No. 6a, 6b, 6c.
<i>struthiopteris</i> .....	Ostrich Fern.....	24-72	At least moist or wet.....	Partial shade..	Don't plant deeply. No. 5a, 8b.
<i>Osmunda cinnamomea</i> ....	Cinnamon Fern.....	4-20	Not particular.....	Will grow in sun	Rather rare. Plant shallow. Rock garden. No. 4a, b.
<i>claytoniana</i> .....	Interrupted Fern.....	4-15	Not particular.....	Sun or shade..	Forms dense mats on cliffs. No. 5a, b.
<i>regalis</i> .....	Royal Fern.....	8-30	Not particular.....	Sun or shade..	Evergreen. Common. Easy to grow. No. 12a, 12b, 12c.
<i>Pellaea atropurpurea</i> .....	Purple Cliffbrake.....	12-24	Moderately acid.....	Sun or shade..	Often becomes weed. Plant deeply. No. 10a, 10b, 10c.
<i>Polypodium vulgare</i> .....	Common Polypody.....				
<i>Polydictyon acrostichoides</i>	Christmas Fern.....				
<i>Pteridium aquilinum</i> .....	Bracken.....				
<i>Pteris</i> (See <i>Pteridium</i> )					
<i>Woodwardia</i>					
<i>areolata</i> ( <i>angustifolia</i> )...	Narrowleaf Chainfern...	12	Acid.....	Partial shade..	Buy plants. Rare. No. 11a, 11b.
<i>virginica</i> .....	Virginia Chainfern.....	24-36	Wet.....	Partial shade..	Can be grown in garden soil.
<i>Woodsia obtusa</i> .....	Common Woodsia.....	6-12	Not wet.....	Shade.....	Plant in front of other ferns.



### Fronds of various kinds of ferns

1. Sensitive Fern—(a) frond; (b) spore bearing frond.
2. Hartford or Climbing Fern.
3. Grape Fern—(a) frond; (b) modified frond producing spore cases; (c) detail of spore cases.
4. Cliffbrake—(a) frond; (b) spore cases like pockets above veins.
5. Common Polypody—(a) frond; (b) large fruiting dots.
6. Interrupted Fern—(a) spore bearing pinnae (leaflets) confined to a few in middle of frond; (b) and (c) details of spore cases.
7. (a) Cinnamon Fern—Fertile frond.
8. Royal Fern (a) frond; with (b) modified pinnae at tip producing spores.
9. Maidenhair Fern (a) Pinnae; (b) detail showing spores beneath the folded margins of pinnae.
10. Bracken—(a) Entire frond; (b) detail of pinnae; (c) spore bearing folded margins of a pinnae.
11. Chainfern—(a) Pinnae; (b) Spore areas in chains.
12. Christmas Fern (a) frond; (b) spore cluster; (c) detail of spore clusters.
13. Bladderfern—(a) frond; (b) fruit dots.



lections of hardy ferns are extremely interesting. Many of the sorts are good for cutting during the Summer.

**CULTURE.** Very few of these ferns will grow in sunny situations. Try to imitate nature when planting them in your gardens. Shady or semi-shady places are best. Plant underneath trees and around tall shrubbery, where the plants will be more or less protected from the sun and hot, dry winds. Good drainage is absolutely necessary and it is advisable to raise the fern bed 3 inches or 4 inches in order to insure this. Plenty of water should be supplied during the dry Summer months. In preparing the soil, dig as deeply as the roots of the trees will allow. If the soil is clayey or poor, use plenty of decayed leaves, peat, manure and other loose materials. The soil should be very fine, light and porous. When planting the small ferns in the rockery almost pure leafmold can be used. None of the ferns should be set deeply in the soil, most of them requiring about an inch of soil covering. Those which grow from crowns should be set on the soil so that the crown is not covered. Ample room should be left between the plants because they spread so readily. The Royal or Flowering Fern can be grown in 2 inches or 3 inches of still water or in very moist places. The Cin-



A ferny walk in a shaded place

namon Fern is usually found in mucky soils. The Gossamer Fern is one of the best to grow along walks for it will grow in either sun or shade.

Ferns should be reset in the Spring or during the Summer through August. This will give plenty of time for a new set of fronds to come while the roots are getting established. If they are planted in the Fall they require a good mulching of leaves. The fronds should be cut back when the plants are moved.

**PROPAGATION.** The Ferns are propagated by dividing the root stalks, which are the underground stems from which the upright stems grow.



## ROCK GARDENS AND PLANTS

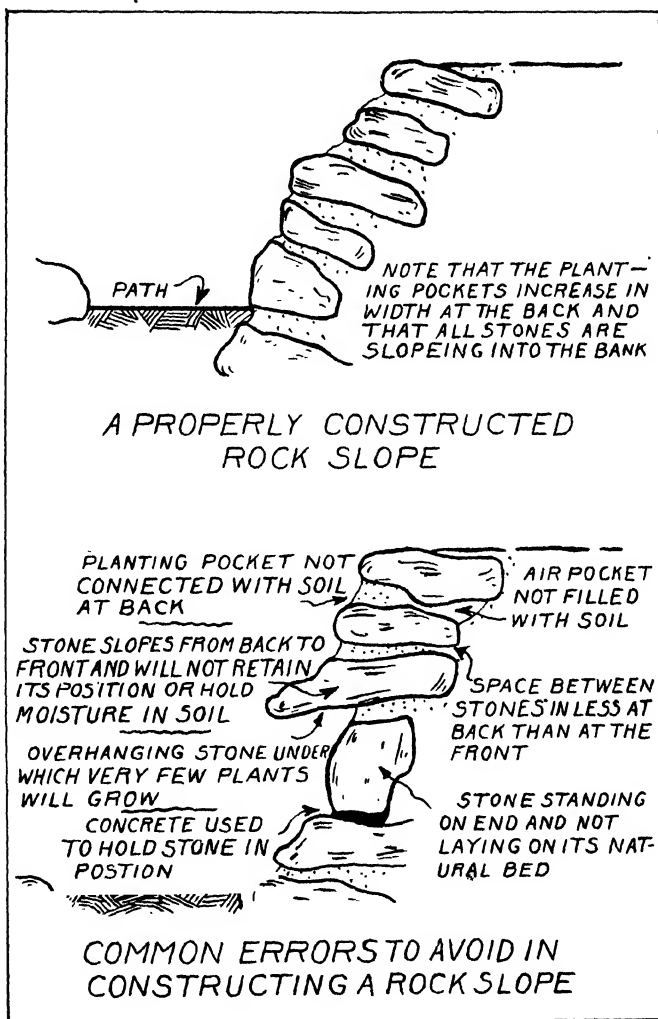
THE gems of the mountains of the world may be brought to our doors if we but give them an environment which is homelike.

Alpine plants typically are those with long roots and a tufted leaf growth and include those which prefer the perfect drainage afforded by sloping rockeries. There is but little nitrogen in the soil of these characteristic natural situations; for this reason the soil requirements of the plants are easily satisfied. Good soil in which leafmold is incorporated is all that is necessary, but use no manure. Provide for perfect drainage, even on a slope, by employing a layer of gravel beneath the area to be used as a rockery.

Tremendous quantities of rock are unnecessary; too often more rocks are used in the construction of such gardens than is necessary. Use the most natural rocks and place them as sensibly as possible, remembering that the appearance will be more restful when the strata runs properly or when the rocks are attractively grouped so that the final result does not have the appearance of a plum pudding full of raisins. Each rock, if it is placed properly, will slope so as to catch the rain and conduct it back into the crevices. It is wise to fill all sections of the rock slope with soil as it is constructed. Large flat spaces may be left to be filled with a gravelly soil. Such areas will correspond to the moraine areas of the mountains. For more complete information, the reader is advised to consult Grace B. Wilder's *Adventures in My Garden and Rock Garden*.

We may thus see that the directions for rockery construction are of the simplest but in actual practice many errors are committed. Unnaturalness results from too precipitous slopes, use of several kinds of stone, and artificial materials, impossible angles of rock, incongruous plants and too regular arrangement of rock so that the area appears to be a series of refuse heaps.

In choosing plants, many of our usual border perennials may be used, but too frequently they are of such rampant growth that shortly the rockery does not consist of a collection of many plants but is instead a mass of few colors blooming at one season only.



Some of the easily grown rock plants which may be recommended are:

- ACHILLEA TOMENTOSA** (Woolly Yarrow). See page 58.
- ADONIS AMURENSIS** (Amur Adonis). Finely cut foliage; yellow buttercup-like flowers but larger. April. Takes a little while to become established. Raised from seed or division. Old seed is worthless; even good seed sometimes waits a year to germinate.
- AETHIONEMA CORIDIFOLIUM** (Lebanon Stonecress). Resembles Hardy Candytuft, but flowers are pink. Raised from seed or cuttings. Give perfect drainage. *Wilder* says they like gritty soil with a little lime.
- ALYSSUM SAXATILE** (Goldentuft). See page 61.
- ANEMONE PULSATILLA** (European Pasqueflower). See page 63.
- ANEMONE PATENS NUTALLIANA** (American Pasqueflower).
- AQUILEGIA**, various (Columbine). See page 66.
- ARABIS ALPINA** (Alpine Rockcress). See page 67.
- ARENARIA MONTANA** (Mountain Sandwort). Dwarf trailing plant. June. White star-shaped flowers. Raised from seed or by cuttings, in Spring or Summer. Sun.
- ARTEMISIA STELLARIANA** (Beach Wormwood). See page 69.
- ASTER ALPINUS** (Rock Aster). See page 72.
- ASTER** (Mauve Cushion). Excellent for late effects in the rockery. See page 73.
- AUBRIETIA DELTOIDEA** (Purple Rockcress). See page 74.
- BEGONIA EVANSIANA** (Hardy Begonia). Growth one foot. Flowers characteristic of Begonias, pink, appearing in late Summer. For shaded and moist spots. Increased by bulbets produced in axils of the leaves.
- BELLIS PERENNIS** (English Daisy). See page 75.
- BELLUM MINUTUM** (Greek Daisy). Like a tiny English Daisy. Raised from seed.
- CAMPANULA CARPATICA** and **ROTUNDIFOLIA** (Bellflower). See page 80.
- CAMPANULA PUSILLA**. Grow 6 to 8 inches. Soft blue bells. June. Very dainty. Raised from seed.
- CATANANCHE CAERULEA** (Cupids-dart). Really an everlasting flower. Flowers somewhat like a Cornflower, purple or white. Foliage very narrow, with a few long teeth. Raised from seed.
- CENTRANTHUS** (**VALERIANA**) **RUBER** (Jupitersbeard). Half spreading plant. Sprays of fine deep red or white flowers. Very showy in June. Raised from cuttings or seed.
- CERASTIUM TOMENTOSUM** (Snow-in-summer). See page 84. A bit too spreading by nature in rock gardens.
- CERATOSTIGMA PLUMBAGINOIDES** (Larpente Plumbago). See page 85.
- CHEIRANTHUS ALLIONI** (Blistercress). Biennial. Brilliant, advancing orange color. Blooms from May through Midsummer. Raised from seed. Growth 10 to 12 inches. Produces heads of golden-yellow flowers with a reddish center. Long season. Raised by division or seed; often self sows.
- DAPHNE CNEORUM** (Garlandflower). See page 92. More adapted to the rockery than the perennial border.
- DIANTHUS**, especially **DELTOIDES**, **CAESIUS** and **PLUMARIUS** (Pinks). See page 97.

**DICENTRA**, various. (Includes Dutchmans-breeches, Plume Bleeding-heart.)

**DRACOCEPHALUM RUYSCHIANA** (Siberian Dragonhead). Upright plants 1 foot tall. Hyssop-like leaves. Purple flowers in spikes. Raised from seed.

**EPIMEDIUM** (Barrenwort). See page 106.

**EUPHORBIA CYPARISSIAS** (Cypress Spurge). Fine foliage; somewhat resembles that of Groundpine (**LYCOPODIUM**). Yellow flowers in late May. May spread too much.

**EUPHORBIA EPITHYMOIDES** or **POLYCHROMA** (Cushion Spurge). Wide foliage; bright yellow flowers in very showy flat heads. Sun. Both sorts are increased by division.



An attractive rockery planned with large soil spaces for plants

From *Gardening*, by L. Williams

**FESTUCA GLAUCA** (Blue Fescue). See page 116.

**GALIUM BOREALE** (Northern Bedstraw). Feathery masses of leaves and flowers. Most persons believe this to be a sort of Babysbreath. There are several wild sorts with bristly stems which catch in clothing. Leaves in whorls; flowers tiny and white, appearing in May and June. Increased by division.

**GERANIUM SANGUINEUM** (Bloodred Cranesbill). See page 112.

**GEUM** (Avens). See page 113.

**GLOBULARIA TRICHOSANTHES** (Globedaisy). Soft blue flowers in dense, globular heads. Good in peaty soils. Increased by seed.

**GYPSOPHILA PANICULATA** (Babysbreath). See page 117.

**HELIANTHEMUM** (Sunrose). See page 120.

**HELONIAS BULLATA** (Swamp-pink). Good for moist places. Racemes of pinkish flowers in May.

**HEUCHERA SANGUINEA** (Coralbells). See page 127.

**HOUSTONIA CAERULEA** (Bluets). One of our wild flowers with the daintiest, four-petaled, light blue flowers. Often difficult to establish.

**IBERIS SEMPERVIRENS** (Evergreen Candytuft). See page 133.

**IRIS CHAMAEIRIS** (Crimcan Iris). See page 134.

**LEONTOPODIUM ALPINUM** (Common Edelweiss). See page 104.

**LIMONUM** (STATICE) **LATIFOLIUM** (Bigleaf Sea-lavender).

**LINARIA CYMBALARIA** (Kenilworth-ivy). Hardy, but commonly seen in greenhouses.

**LINUM PERENNE** (Perennial Flax). See page 138.

**MYOSOTIS ALPESTRIS** (Alpine Forget-me-not). See page 144.

**NEPETA MUSSINI** (Caucasian Catnip). See page 145.

**NIEREMBERGIA RIVULARIS** (Whitecup). Low growth. Cup-shaped, creamy white flowers. June to August. Raised from seed.

**PHLOX SUBULATA** and **AMOENA**. See page 158.

**POLEMONIUM** (Jacobs-ladder). See page 163.

**PRIMULA** (Primrose). See page 165.

**SAGINA SUBULATA** (Pearlwort). Green mat of growth. Leaves and flowers very tiny; flowers star-like, white. Increased by division.

**SANTOLINA CHAMAECYPARISSUS** (Lavender-cotton). Gray leaves; very fine. Really a shrub. Raised from cuttings.

**SAPONARIA OCYMOIDES** (Rock Soapwort). Prostrate plants. Foliage completely smothered with lilac-pink flowers in late May. Spreads widely. Increased from seed or cuttings inserted in coldframe in early Summer.

**SATUREIA** (**CALAMINTHA**) **ALPINA** (Alpine Savory). Good foliage. Dainty spikes of rosy-purple flowers. Raised from seed.

**SAXIFRAGA**, various (Saxifrage). Typically rock plants. There are numerous sorts, some quite like Stonerocks, others not unlike Hen-and-chickens plants. **S. CORDIFOLIA** and **S. OPPOSITIFOLIA** have wide, almost round leaves and spikes of bell-shaped flowers. Raised from division or seed.

**SEDUM**, various (Stonerock). See page 171.

**SEMPERVIVUM ARACHNOIDEUM** (Spiderweb Houseleek). Low rosettes of leaves furnished with hairs, giving the appearance of spiderwebs. Flowers bright red.

**S. TECTORUM** (Hen-and-chickens) (Roof Houseleek). Pale green leaves and rosy red flowers. Both propagated by offsets.

- SILENE SCHAFTA (Schafra Catchfly). Rosy flowers. Spreading growth. Bloom in July. Raised from seed or cuttings.
- STACHYS LANATA (Woolly Betony). Bears leaves covered with white, silky fur. Spreading growth. Flowers violet, produced in July. Propagated by division.
- TEUCRIUM CHAMAEDRYS (Chamaedryst Germander). Shrubby. Sparse blooming, but with glossy and attractive small leaves. Flowers rosy purple in early Summer. Raise from seed.
- THALICTRUM MINUS (Low Meadowrue). See page 177.
- THYMUS SERPYLLUM (Mother-of-thyme). Low, mat-like growth. Tiny leaves and white or rosy-purple flowers. June. T. s. VULGARIS has larger leaves which are lemon-scented, hence it is known as Lemon Thyme.
- TROLLIUS EUROPAEUS (Common Globeflower). See page 177.
- TUNICA SAXIFRAGA (Saxifrage Tunicflower). Mat-like plants, with smaller flowers and leaves than the Maiden Pink (*Dianthus deltoides*), but resembling it. Flowers bluish colored. Raised from seed and division.
- VERONICA (Speedwell). See page 178. Also V. PECTINATA (Comb Speedwell), which has grayish, woolly leaves and pink flowers. Prostrate growth.
- VIOLA (Violets). See page 179.





## THE LISTS OF TWENTY-FIVES

### TWENTY-FIVE PERENNIALS FOR DRY PLACES

- |   |  |
|---|--|
| ACHILLEA MILLEFOLIUM ROSEA<br>(Pink Yarrow) | HELIANTHUS, various (Perennia <sup>1</sup><br>Sunflower) |
| AJUGA GENEVENSIS (Geneva Bugle)             | HEMEROCALLIS, various (Daylily)                          |
| ANTHEMIS TINCTORIA (Yellow Cam-<br>omile)   | IRIS, BEARDED.   |
| ASCLEPIAS TUBEROSA (Butterfly-<br>weed)     | LEONTOPODIUM ALPNUM (Edel-<br>weiss)                     |
| ASTER, various (Michaelmas Daisy)           | LIMONIUM (Statice) LATIFOLIUM<br>(Bigleaf Sea-lavender)  |
| CALLIRHOE INVOLUCRATA (Low<br>Poppymallow)  | LYCHNIS CORONARIA (Rose Cam-<br>pion)                    |
| CASSIA MARILANDICA (American<br>Senna)      | OENOTHERA MISSOURIENSIS (Ozark<br>Sundrops)              |
| COREOPSIS GRANDIFLORA (Big Core-<br>opsis)  | OPUNTIA, various (Hardy Cactus)                          |
| DIANTHUS BARBATUS (Sweet-wil-<br>liam)      | PAPAVER NUDICAULE (Iceland<br>Poppy)                     |
| ECHINOPS RITRO (Steel Globethistle)         | PHLOX, Hardy   |
| EUPHORBIA COROLLATA (Flowering<br>Spurge)   | RUDBECKIA LACINIATA (Cutleaf<br>Coneflower)              |
| GYPSOPHILA PANICULATA (Babys-<br>breath)    | VERONICA RUPESTRIS (Rock Speed-<br>well)                 |
|   | YUCCA FILAMENTOSA (Adamsneedle)                          |

### TWENTY-FIVE PERENNIALS FOR WET PLACES

\*May be grown in water.

- |   |   |
|---|---|
| *ARUNDO DONAX (Giant Reed)              | *IRIS PSEUDACORUS (Yellowflag Iris)             |
| ASCLEPIAS INCARNATA (Swamp<br>Milkweed) | I. SIBIRICA (Siberian Iris)                     |
| BOLTONIA ASTEROIDES (Starwort)          | *I. VERSICOLOR (Blueflag Iris)                  |
| *CALTHA PALUSTRIS (Marshmari-<br>gold)  | LOBELIA CARDINALIS (Cardinal-<br>flower)        |
| EULALIA JAPONICA (Zebra Grass)          | L. SIPHILITICA (Large Blue Lo-<br>belia)        |
| EUPATORIUM PERFOLIATUM (Bone-<br>set)   | LYSIMACHIA CLETHROIDES (Clethra<br>Loosestrife) |
| E. PURPUREUM (Joe-pye-weed)             | LYTHRUM SALICARIA (Purple Loose-<br>strife)     |
| FERNS                                   | MYOSOTIS PALUSTRIS (Forget-me-<br>not)          |
| ONOCLEA SENSIBILIS (Sensitive<br>Fern)  | *PONTEDERIA CORDATA (Pickerel-<br>weed)         |
| *OSMUNDA REGALIS (Royal Fern)           | RANUNCULUS, several (Buttercup)                 |
| OSMUNDA CINNAMOMEA (Cinna-<br>mon Fern) | *SAGITTARIA LATIFOLIA (Arrowhead)               |
| HELENIUM AUTUMNALE (Sneeze-<br>weed)    | *SARRACENIA PURPUREA (Pitcher-<br>plant)        |
| HIBISCUS MOSCHEUTOS (Rosemal-<br>low)   | *TYPHA LATIFOLIA (Cattail)                      |

**TWENTY-FIVE BEST PERENNIALS FOR CUT FLOWERS**

- |  |   |
|--|---|
| ACHILLEA MILLEFOLIUM ROSEA (Pink Yarrow) | HELENIUM AUTUMNALE, Riverton Beauty (Sneezeweed)  |
| A. PTARMICA (The Pearl)                  | H. AUTUMNALE, Riverton Gem (Sneezeweed)           |
| ANEMONE JAPONICA (Japanese Anemone)      | HELIANTHUS DECAPETALUS (Thin-leaf Sunflower)      |
| ASTER St. EGWIN (Hardy Aster)            | IRIS, various (Flag)                              |
| CENTAUREA, various (Cornflowers)         | KNIPHOFIA UVARIA (Torchlily)                      |
| CHRYSANthemUM, Hardy                     | PAEONIA (Peony)                                   |
| C. MAXIMUM (Shasta Daisy)                | PHYSOSTEGIA VIRGINIANA (False-dragonhead)         |
| COREOPSIS GRANDIFLORA (Big Coreopsis)    | PYRETHRUM ROSEUM (Painted Lady)                   |
| DELPHINIUM hybrids (Larkspur)            | RUDBECKIA, various (Coneflower)                   |
| DIANTHUS BARBATUS (Sweet-william)        | SALVIA AZUREA GRANDIFLORA (Great Azure Sage)      |
| D. PLUMARIUS (Clove Pink)                | SEDUM SPECTABILE (Showy Stonecrop)                |
| GAILLARDIA GRANDIFLORA (Blanketflower)   | VERONICA LONGIFOLIA SUBSESSILIS (Clump Speedwell) |
| CYPSOPHILA, various (Babysbreath)        |   |

**TWENTY-FIVE EDGING PLANTS**

(Less than a foot tall)

- |   |   |
|---|---|
| AEGOPODIUM PODOGRARIA (Goutweed)                | FESTUCA GLAUCA (Blue Fescue)              |
| AJUGA REPTANS (Carpet Bugle)                    | FILIPENDULA HEXAPETALA (Dropwort)         |
| ALYSSUM SAXATILE COMPACTUM (Dwarf Goldentuft)   | HEUCHERA SANGUINEA (Coralbells)           |
| ARABIS ALPINA (Alpine Rockcress)                | IBERIS SEMPERVIRENS (Evergreen Candytuft) |
| BELLIS PERENNIS (English Daisy)                 | IRIS PUMILA (Dwarf Iris)                  |
| CAMPANULA CARPATICA (Carpathian Bellflower)     | PAPAVER NUDICAULE (Iceland Poppy)         |
| CERASTIUM TOMENTOSUM (Snow-in-summit)           | PHLOX SUBULATA (Moss Phlox)               |
| CERATOSTIGMA PLUMBAGINOIDES (Larpente Plumbago) | PRIMULA VERIS (Cowslip Primrose)          |
| CRUCIANELLA STYLOSA (Crosswort)                 | SEDUM, various (Stonecrop)                |
| DIANTHUS BARBATUS (Sweet-william)               | STATICE ARMERIA (Thrift)                  |
| D. PLUMARIUS (Grass Pink)                       | TUNICA SAXIFRAGA (Saxifrage Tunicflower)  |
| DICENTRA EXIMIA (Fringed Bleedingheart)         | VERONICA INCANA (Woolly Speedwell)        |
|   | VERONICA RUPESTRIS (Rock Speedwell)       |

**TWENTY-FIVE TALLEST PLANTS**

(All are above five feet tall)

Excellent for bold foliage and flower effects

- |                           |   |
|---------------------------|---|
| ALTHAEA ROSEA (Hollyhock) | ASTER NOVAE-ANGLIAE (New England Aster) |
| ARUNDO DONAX (Giant Reed) |   |

## TWENTY-FIVE TALLEST PLANTS—Continued

ASTER TATARICUS (Tatarian Aster)	EUPATORIUM PURPUREUM (Joe-pye weed)
BOCCONIA CORDATA (Plumepoppy)	HELENIUM AUTUMNALE (Sneezeweed)
BOLTONIA ASTEROIDES (Starwort)	HELIANTHUS MAXIMILIANI (Maximilian Sunflower)
CAMPANULA PYRAMIDALIS (Chimney Bellflower)	H. ORGYALIS (Narrowleaf Sunflower)
CASSIA MARILANDICA (American Senna)	HIBISCUS MOSCHEUTOS (Rosemallow)
CEPHALARIA MONTANA (Round-heads)	POLYGONUM SACHALINENSE (Sackline)
CIMICIFUGA RACEMOSA (Cohosh Bugbane)	RUDBECKIA LACINIATA (Cutleaf Coneflower)
DELPHINIUM (Larkspur)	R. MAXIMA (Great Coneflower)
EREMURUS ROBUSTUS (Giant Desertcandle)	SOLIDAGO ALTISSIMA (Tall Goldenrod)
ERIANTHUS RAVENNAE (Ravenna Grass)	VALERIANA OFFICINALIS (Valerian)
EULALIA JAPONICA (Zebra Grass)	YUCCA FILAMENTOSA (Adamsneedle)

## MORE THAN TWENTY-FIVE BLUE PERENNIALS

ANCHUSA ITALICA, Dropmore variety (Italian Bugloss). Deep blue	IRIS PALLIDA DALMATICA, PUMILA and others. Deep and light blue
AQUILEGIA CAERULEA (Colorado Columbine). Deep blue	LINUM PERENNE (Flax). Deep blue
ASTER ALPINUS, TATARICUS and others. Light blue	LOBELIA SIPHILITICA (Blue Lobelia). Deep blue
BAPTISIA TINCTORIA (Yellow Wild-indigo). Deep blue	LUPINUS POLYPHYLLUS (Washington Lupine). Deep blue
CAMPANULA CARPATICA. PERSICIFOLIA, MEDIUM and others.	MERTENSIA VIRGINICA (Virginia Bluebells). Clear blue
CENTAUREA MONTANA. Deep blue	MYOSYTIS (Forget-me-not). Light blue
CERATOSTIGMA PLUMBAGINOIDES (Larpente Plumbago). Deep blue	NEPETA HEDERACEA (Ground-ivy)
DELPHINIUM GRANDIFLORUM, Gold Medal hybrids, Belladonna Belladonna. Deep and light blue.	POLEMONIUM CAERULEUM, HUMILE and REPTANS. Light blue.
S RITRO (Sweet Giobettus- tle). Deep blue	PULMONARIA ANGUSTIFOLIA AZUREA (Azure Lungwort). Clear blue.
EUPATORIUM COELESTINUM (Mistflower). Medium blue	SCABIOSA CAUCASICA (Caucasian Scabiosa). Light blue
ERYNGIUM AMETHYSTINUM (Amethyst Eryngo). Deep blue	TRADESCANTIA VIRGINIANA (Spiderwort). Deep blue
HOSTA CAERULEA (Blue Plantain-lily). Deep blue.	VERONICA RUPESTRIS, SPICATA and others (Speedwell). Deep blue.

### TWENTY-FIVE MOST USED WHITE PERENNIALS FOR GARDEN EFFECT

- ACHILLEA PTARMICA**, Perry White (Sneezewort), 2 ft., July-Sept.  
**ANEMONE JAPONICA**, Whirlwind (Japanese Anemone), 2-3 ft., Fall  
**AQUILEGIA VULGARIS NIVEA** (Munstead Columbine), 2 ft., May  
**ARABIS ALPINA** (Rockcress), 1 ft., April  
**ASTER PTARMICOIDES** (Hardy Aster), 1½ ft., Aug.  
**CERASTIUM TOMENTOSUM** (Snow-in-summer), 9 in., May  
**CAMPANULA CARPATICA ALBA** (Carpathian Bluebell), 9 in., June-Oct.  
**C. PERSICIFOLIA ALBA** (Peachleaf Bellflower), 2 ft., June-July  
**CHRYSANTHEMUM** (Shasta Daisy), 1½ ft., May-July  
**C. ULIGINOSUM** (Giant Daisy), 4 ft., Sept.-Oct.  
**CLEMATIS RECTA** (Ground Clematis), 3 ft., June-July  
**DELPHINIUM GRANDIFLORUM ALBA** (White Siberian Larkspur), 2 ft., July-Sept.  
**FILIPENDULA ULMARIA** (Meadow-sweet), 1½ ft., June-July  
**GYPSOPHILA PANICULATA** and **ACUTIFOLIA** (Babysbreath), 2-3 ft. June-July  
**HIBISCUS OCULIROSEUS** (Crimson-eye Rosemallow), 4 ft., July-Sept.  
**HOLLYHOCK**, 6-8 ft., June  
**HOSTA PLANTAGINEA** (Plantainlily), 1½ ft., July  
**IBERIS SEMPERVIRENS** (Evergreen Candytuft), 1 ft., April  
**IRIS SIBIRICA**, Snow Queen (Siberian Iris), 3 ft., June  
**LYSIMACHIA CLETHROIDES** (Clethra Loosestrife), 2 ft., July-Sept.  
**PHLOX SUFFRUTICOSA**, Miss Lingard (Hardy Phlox), 3 ft., June  
**PHYSOSTEGIA VIRGINIANA ALBA** (False-dragonhead), 3 ft., June-July  
**VALERIANA OFFICINALIS** (Valerian), 4 ft., June-July  
**VERONICA VIRGINICA** (Culvers-physic), 3-4 ft., July-Aug.  
**YUCCA FILAMENTOSA** (Yucca), 4 ft., July

### TWENTY-FIVE DAISY-LIKE FLOWERS OF VARIOUS COLORS

- ANTHEMIS TINCTORIA** (Camomile). Lemon-yellow  
**ASTER LAEVIS** (Smooth Aster). Lilac lavender  
**A. NOVAE-ANGLIAE** (New England Aster). Purple  
**A. NOVBELGI** (New York Aster). Pink  
**A. PTARMICOIDES**. White  
**BELLIS PERENNIS** (English Daisy). Crimson to white  
**BOLTONIA ASTEROIDES** (White Boltonia). White  
**B. LATISQUAMA** (Violet Boltonia). Blue violet  
**CHRYSANTHEMUM MAXIMUM** (Pyrenees Chrysanthemum). White  
**C. ULIGINOSUM** (Giant Daisy). White  
**COREOPSIS GRANDIFLORA** (Big Coreopsis). Golden  
**DORONICUM**, various (Leopardbane). Golden  
**ECHINACEA PURPUREA** (Purple Coneflower). Rosy purple  
**ERIGERON**, various (Fleabane). Rosy purple to white  
**GAILLARDIA ARISTATA** (Blanket-flower). Yellow and crimson  
**HELENIUM AUTUMNALE**, Riverton Gem and others (Sneezeweed). Maroon to gold  
**H. HOOPESI** (Orange Sneezeweed). Yellow

### TWENTY-FIVE DAISY-LIKE FLOWERS OF VARIOUS COLORS—Continued

- HELIANTHUS MAXIMILIANI** (Maximilian Sunflower). Gold  
**H. ORGYALIS** (Fineleaf Sunflower). Gold  
**HELIOPSIS SCABRA**, Excelsior (Rough Heliopsis). Gold  
**INULA ENSIFOLIA** (Swordleaf Inula). Yellow  
**LEPACHYS PINNATA** (Grayhead Coneflower). Yellow  
**PYRETHRUM ROSEUM** (Pink Daisy). Crimson to white  
**RUDBECKIA MAXIMA** (Great Coneflower). Gold  
**R. NEWMANNI** (Showy Coneflower). Gold, purple cone

### TWENTY-FIVE PERENNIALS FOR APRIL BLOOM

- ADONIS AMURENSIS** (Amur Adonis)  
**A. VERNALIS** (Spring Adonis)  
**ALYSSUM SAXATILE** (Goldentuft)  
**ARABIS ALPINA** (Rockcress)  
**AUBRIETIA DELTOIDEA** (Purple Rockcress)  
**BELLIS PERENNIS** (English Daisy)  
**CALTHA PALUSTRIS** (Marshmarigold)  
**CLAYTONIA VIRGINICA** (Virginia Springbeauty)  
**DAPHNE CNEORUM** (Rose Daphne)  
**DICENTRA CANADENSIS** (Squirrelcorn)  
**D. CUCULLARIA** (Dutchmans-breeches)  
**DORONICUM**, various (Leopardbane)  
**ERYTHRONIUM AMERICANUM** (Troutlily)  
**HEPATICA TRILOBA** (Roundlobe Hepatica)  
**IBERIS SEMPERVIRENS** (Evergreen Candytuft)  
**IRIS CHAMAEIRIS (PUMILA)** (Baby Iris)  
**MERTENSIA VIRGINICA** (Virginia Bluebells)  
**PAPAVER NUDICAULE** (Iceland Poppy)  
**PHLOX DIVARICATA** (Blue Phlox)  
**P. SUBULATA** (Moss Phlox)  
**PRIMULA**, various (Primrose)  
**SANGUINARIA CANADENSIS** (Bloodroot)  
**SAXIFRAGA CORDIFOLIA** (Saxifrage)  
**THALICTRUM DIOICUM** (Early Meadowrue)  
**TRILLIUM**, various

### TWENTY-FIVE PERENNIALS FOR MAY BLOOM

- AJUGA REPTANS** (Carpet Bugle)  
**ALYSSUM SAXATILE** (Goldentuft)  
**AQUILEGIA**, various (Columbine)  
**BELLIS PERENNIS** (English Daisy)  
**CONVALLARIA MAJALIS** (Lily-of-the-valley)  
**DIANTHUS BARBATUS** (Sweet-william)  
**D. PLUMARIUS** (Grass Pink)  
**DICENTRA (Dielytra) SPECTABILIS** (Bleedingheart)  
**EPIMEDIUM**, various  
**HELENIUM HOOPESII** (Orange Sneezeweed)  
**IBERIS SEMPERVIRENS** (Evergreen Candytuft)  
**IRIS FLORENTINA** (Florentine Iris)  
**I. INTERMEDIATE VARS.**  
**I. CHAMAEIRIS (PUMILA)** (Baby Iris)  
**I. VERNALIS** (Vernal Iris)  
**MERTENSIA VIRGINICA** (Bluebells)  
**MYOSOTIS**, various (Forget-me-not)  
**OENOTHERA FRUTICOSA** (Sundrops)  
**PAEONIA MOUTAN** (Tree Peony)  
**POLEMONIUM CAERULEUM** (Greek-valerian)  
**PRIMULA**, various (Primroses)  
**PYRETHRUM ROSEUM** (Pink Daisy)  
**SEDUM ACRE** (Goldmoss)  
**TROLLIUS EUROPAEUS** (Globeflower)  
**VIOLA**, various (Pansy and Viola)

## TWENTY-FIVE PERENNIALS FOR JUNE BLOOM

- ACHILLEA MILLEFOLIUM ROSEA (Pink Yarrow)  
   A. PTARMICA (The Pearl).  
   A. TOMENTOSA (Woolly Yarrow)  
 CAMPANULA MEDIUM (Canterbury-bells)  
   C. PERSICIFOLIA (Peachleaf Bellflower)  
 CHRYSANTHEMUM MAXIMUM (Shasta Daisy)  
 COREOPSIS GRANDIFLORA (Big Coreopsis)  
 DELPHINIUM, various (Hardy Larkspur)  
 DIANTHUS BARBATUS (Sweet-william)  
   D. PLUMARIUS (Grass Pink)  
 DICTAMNUS ALBUS (Gasplant)  
 DIGITALIS, various (Foxglove)  
 ECHINOPS RITRO (Steel Globethistle)  
 GEUM COCCINEUM (Avens)  
 HEMEROCALLIS, various (Daylily)  
 HEUCHERA SANGUINEA (Coralbells)  
 HOLLYHOCK  
 IRIS, bearded (German Iris)  
   I. SIBIRICA (Siberian Iris).  
 LYCHNIS, various (Campion)  
 PENTSTEMON, various  
 PAPAVER NUDICAULE (Iceland Poppy)  
   P. ORIENTALE (Oriental Poppy)  
 PAEONIA (Peony)  
 PYRETHRUM ROSEUM (Pink Daisy)

## TWENTY-FIVE PERENNIALS FOR JULY BLOOM

- ACHILLEA FILIPENDULINA (Fernleaf Yarrow)  
   A. MILLEFOLIUM ROSEA (Pink Yarrow)  
   A. PTARMICA, The Pearl  
 ACONITUM NAPELLUS (Aconite)  
 ANGHUSA ITALICA, Dropmore variety (Italian Bugloss)  
 ANTHEMIS TINCTORIA (Yellow Camomile)  
 ARUNCUS SYLVESTER (Goatsbeard)  
 CHRYSANTHEMUM MAXIMUM (Shasta Daisy)  
 CASSIA MARILANDICA (Wild Senna)  
 DELPHINIUM, various (Hardy Larkspur)  
 DIGITALIS PURPUREA (Foxglove)  
 FILIPENDULA ULMARIA (European Meadowsweet)  
 GAILLARDIA ARISTATA (Blanket-flower)  
 GEUM COCCINEUM (Avens)  
 HEMEROCALLIS THUNBERGI (Daylily)  
 HEUCHERA SANGUINEA (Coralbells)  
 HOLLYHOCK  
 IRIS KAEMPFERI (Japanese Iris)  
 LYCHNIS, various (Campion)  
 PENTSTEMON, various  
 PHLOX SUFFRUTICOSA (Miss Lingard)  
 PLATYCODON (Balloonflower)  
 SCABIOSA CAUCASICA (Caucasian Scabiosa)  
 STOKESIA CYANEA  
 TRADESCANTIA VIRGINIANA (Virginia Spiderwort)

## TWENTY-FIVE PERENNIALS FOR AUGUST BLOOM

- ACHILLEA, various (see July) (Yarrow)  
 ANTHEMIS TINCTORIA (Yellow Camomile)  
 ARTEMISIA, various (Wormwood and others)  
 BOLTONIA ASTEROIDES (White Boltonia)  
 CARYOPTERIS INCANA (Bluebeard)  
 COREOPSIS GRANDIFLORA (Big Coreopsis)  
 DELPHINIUM, various (Hardy Larkspur)  
 ERYNGIUM AMETHYSTINUM (Ame-thyst Eringo)

**TWENTY-FIVE PERENNIALS FOR AUGUST BLOOM—Continued**

FUNKIA, various (Plantainlily)  
 GAILLARDIA ARISTATA (Blanket-flower)  
 GYPSOPHILA PANICULATA (Baby's-breath)  
 HELIOPSIS PITCHERIANA (Pitcher Heliopsis)  
 HEUCHERA SANGUINEA (Coralbells)  
 HIBISCUS MOSCHEUTOS (Rosemallow)  
 KNIPHOFIA UVARIA (Torchlily)  
 LIATRIS PYNOSTACHYA (Cattail Gayfeather)  
 LINUM PERENNE (Perennial Flax)

LOBELIA, various  
 MONARDA DIDYMA, Cambridge Scarlet (Beebalm)  
 PHLOX, hardy  
 PHYSOSTEGIA VIRGINIANA (False-dragonhead)  
 PLATYCODON, various (Balloon-flower)  
 SCABIOSA CAUCASICA (Caucasian Scabiosa)  
 TUNICA SAXIFRAGA (Saxifrage Tunicflower)  
 VERONICA LONGIFOLIA SUBSESSILIS (Clump Speedwell)

**TWENTY-FIVE PERENNIALS FOR SEPTEMBER BLOOM**

ACONITUM AUTUMNALE (Autumn Monkshood)  
 ANEMONE JAPONICA (Japanese Anemone)  
 ARTEMISIA LACTIFLORA (Mugwort)  
 ASTER, various (Michaelmas Daisy)  
 BOLTONIA ASTEROIDES (White Boltonia)  
 CHRYSANTHEMUM MAXIMUM (Shasta Daisy varieties)  
 CHELONE GLABRA (White Turtle-head)  
 CIMICIFUGA DAHURICA (Dahurian Bugbane)  
 EUPATORIUM, various (Boneset and others)  
 GAILLARDIA ARISTATA (Blanket-flower)  
 HELIANTHUS MAXIMILIANI (Maximilian Sunflower)  
 HELIANTHUS ORGYALIS (Narrow-leaved Sunflower)

HELENIUM, various (Sneezeweed)  
 HELIOPSIS PITCHERIANA (Pitcher Heliopsis)  
 HIBISCUS MOSCHEUTOS (Common Rosemallow)  
 LATHYRUS LATIFOLIUS (Perennial Pea)  
 LIATRIS PYNOSTACHYA (Cattail Gayfeather)  
 LOBELIA CARDINALIS (Cardinal-flower)  
 L. SIPHILITICA (Large Blue Lobelia)  
 PHYSOSTEGIA VIRGINIANA (False-dragonhead)  
 POLYGONUM, various (Fleeceflower)  
 RUDBECKIA, various (Coneflower, Black-eyed-susan)  
 SEDUM SPECTABILE (Showy Stonecrop)  
 STOKESIA LAEVIS  
 VERONICA LONGIFOLIA SUBSESSILIS (Clump Speedwell)

**TWENTY-FIVE PERENNIALS BLOOMING AFTER FROST**

ACONITUM FISCHERI (Azure Monkshood)  
 ANEMONE JAPONICA (Japanese Anemone)  
 ASTER, various (Michaelmas Daisy)  
 BOLTONIA ASTEROIDES (White Boltonia)

CALLIRHOE INVOLUCRATA (Low Poppymallow)  
 CERATOSTIGMA PLUMBAGINOIDES (Larpenet Plumbago)  
 CHRYSANTHEMUM, hardy sorts  
 DAPHNE CNEORUM (Rose Daphne)

**TWENTY-FIVE PERENNIALS BLOOMING AFTER FROST—  
Continued**

DELPHINIUM GRANDIFLORUM (Si- berian Larkspur)	KNIPHOFIA UVARIA (Torchlily)
DIANTHUS LATIFOLIUS ATROCOC- CINEUS (Everblooming Sweet- william)	LATHYRUS LATIFOLIUS (Perennial Pea)
ECHINACEA PURPUREA (Purple Cone- flower)	PHLOX, Hardy sorts
EUPATORIUM COELESTINUM (Mist- flower)	POLYGONUM AMPLEXICAULE (Moun- tain Fleecceflower)
GAILLARDIA ARISTATA (Blanket- flower)	SALVIA AZUREA GRANDIFLORA (Great Azure Sage)
HELIANTHUS MAXIMILIANI (Maximi- lian Sunflower)	S. FARINACEA (Mealycup Sage)
H. ORGYALIS (Fine-leaved Sun- flower)	S. ULIGINOSA (Bog Sage)
	SOLIDAGO, various (Goldenrod)
	STOKESIA LAEVIS
	VIOLA CORNUTA (Tufted Pansy)





**SPECIES.** The common Monkshood or Aconite (*Aconitum napellus*) blooms early, has large, dark blue flowers and grows 5 feet to 6 feet high. A variety of this one has white flowers with flesh-colored edges and another has decided pink markings on it, but in most places are not as good as the type. Wolfsbane (*A. lycoctonum*) blooms in June and July, is 4 feet high and has soft yellow flowers. *A. fischeri* is the last one to bloom. It is only 3 feet tall, has pale blue flowers and blooms in October. *A. wilsoni* is a variety with deeper colored flowers.

**USES.** The Monkshoods are planted among shrubbery and in borders, especially in combination with Madonna Lilies, white Phlox and Shasta Daisies. Most of the varieties are valuable to fill in vacant spaces in the garden when the earlier blooming plants have passed. They are excellent for naturalizing in a woods. Since the roots are poisonous, one should be careful to avoid planting them near a vegetable garden where they might be mistaken for another plant, or where children could get to them. The effect of the glossy leaves is very striking, especially of *A. fischeri*. If undisturbed in the woods, they will naturalize themselves very easily. Aconitums should always be planted in masses.

***Aconitum napellus*  
(Monkshood) is the  
earlier species of this  
glorious genus**

**CULTURE.** Aconitums grow in almost any good garden soil, either in sun or partial shade. In the hotter and drier parts of the United States the leaves often burn, becoming black as though diseased. When the ground is being prepared for planting, one should dig deeply and use plenty of well-decayed cow manure. Good culture, an abundance of water and liberal feeding add greatly.

**PROPAGATION.** It is a rather slow process to raise them from seed since it takes twenty days for the seed to germinate. Even then germination is poor. Old seed is worthless. However, they are propagated by division of the roots which is slow. They grow best when left undisturbed for years.

## **Aegopodium—Goutweed (Bishops-weed)**

Wherever one goes, through many gardens and even in some woods, this green and yellow variegated plant has spread its roots until it has almost come to be considered a troublesome weed by many people, although in its place it is of great value. The white flower is rather inconspicuous and does not show up well against the light colored leaves. *Aegopodium podagraria* is a small creeping plant with white margined leaves.

**USES.** The Goutweed makes a beautiful border for a bed of shrubs or flowers, if it is not allowed to spread too freely. It grows to best advantage when used to cover waste ground or shady places where grass will not grow. It is well used in the narrow strips of soil between the foundation wall and a sidewalk.

**CULTURE.** It thrives in any kind of soil.

**PROPAGATION.** By seeds, and division.

## **Ajuga—Bugle (Carpenters-herb)**

For creeping over the soil in shaded places the Bugle is excellent. Two sorts are commonly catalogued. *Ajuga reptans rubra*, Purpleleaf Bugle, has deep purplish-blue flowers and purplish leaves and is prostrate in habit; *A. genevensis*, Geneva Bugle, is more upright in growth and bears flowers varying in color from dull red to white and blue. There is a variegated form of the Bugle in which the leaves are mottled with yellow. They flower in May. They somewhat resemble *Prunella* or Selfheal.

**USE.** It is an excellent carpet plant and is often used in cemeteries. When clipped into form it serves as an excellent edging plant. Rockeries are often planted with the Ajuga, but the plants take possession of such spots. The plants will grow beneath trees where a lawn is difficult to establish.

**CULTURE AND PROPAGATION.** The plants, being of a spreading habit, are easily divided either in Spring or Fall. Seeds grow readily.

## **Alyssum—Goldentuft, (Madwort), (Basket-of-gold), (Gold-dust), (Rockmadwort)**

The various Alyssums have been known for a long time as some of the best edging plants for borders of all kinds. They have been com-

bined with Darwin Tulips, with Rockcress (*Arabis*) and the False Wallcress (*Aubrietia*), and also with shrubs, such as the Spiraeas and Hydrangeas. Just as soon as Winter is over, the Alyssum makes preparations to grow, and within a month it presents a mass of yellow flowers. It is in bloom from early Spring through June and grows from 4 inches to 12 inches high. The Dwarf Goldentuft (*Alyssum saxatile compactum*) is of a dwarf, shrubby nature with grayish-green leaves and dense heads of brilliant golden yellow flowers, and is one of the best yellow, low growing plants of early Spring. The variety *A. citrinum* is of a pale citron color and more refined. There is also a double form with yellow flowers. The Yellowhead Alyssum or Madwort (*A. rostratum*) has golden-yellow flowers, grows about 12 inches high and blooms somewhat later than the others.

**USES.** The Alyssums are indispensable plants for the rock garden, especially where plants are needed to droop over the rocks. They are planted along sidewalks, in hanging baskets, and as groups or edges for the border. The annuals, being sweet-scented, are also used for cutting purposes, and are good for Winter blooming.

**CULTURE.** They are very easy to grow, requiring some limestone, a well-drained soil and a sunny situation. They spread rapidly and bloom very freely.

**PROPAGATION.** Seeds should be sown in August and wintered over in a light, airy position until large enough to be planted out, if good-sized plants are desired in the Spring. The double sorts cannot be grown from seeds and must be propagated from cuttings. The roots of the plant can also be divided.

## **Anchusa—Bugloss, (Alkanet) (Italian Borage) (Summer Forget-me-not)**

One of the colors which all amateur gardeners wish is a good, strong blue, one which does not fade easily but which holds its own. Anchusas when planted in large masses, appear as a misty sea of deep blue when in bloom. Although possessing nothing to recommend it as a cut flower, it is a tall growing blue perennial that is deserving of a place in every garden. The plants of *Anchusa italica*, Dropmore Variety, which is the commonest one grown, attains a height of 3 feet to 5 feet, and blooms during June and July. The leaves are very large, heavy and hairy. The flowering branches are sent out in all directions from the plant and bear large, loose clusters of giant Forget-me-nots of soft turquoise blue. Many have a white eye. The blooming season

can be easily lengthened by cutting down the taller sprays when the flowers begin to fade. This will cause smaller spikes to appear which will continue blooming through September. They are of such beauty and are so attractive in early Spring when so few blue flowers are in sight, that they have proven very popular. The bees also delight in visiting them.

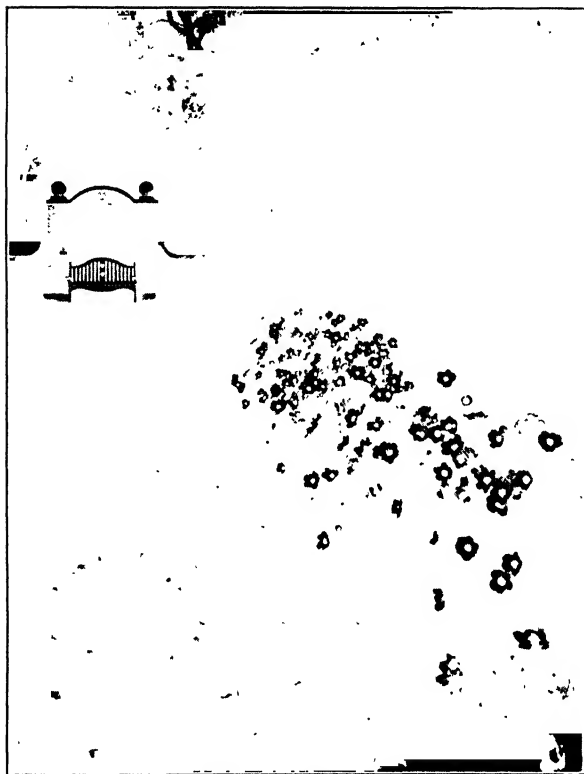
**USES.** Anchusas have proven an invaluable plant for the border, and are used in woodlands to a certain extent. *A. myosotidiflora*, the Siberian Bugloss, is a dwarf variety bearing small flowers and is used effectively in rock gardens, especially in shady nooks, where it blooms all Summer.

**CULTURE.** Any good garden soil, plenty of sunshine, and a well-drained situation suit them. Most of the plants become fully established during the second or third year. They are moisture-loving plants and should be given copious soakings of water during dry spells. The plants should be staked during the flowering season.

**PROPAGATION.** Seeds and division of the plant. Anchusas self-sow very readily. The roots are very juicy and brittle so that when the plants are dug, they are frequently broken. Each root allowed to remain in the soil will produce a new plant, a trait considered to be objectionable to many persons.

## Anemone—(Windflower)

There are many kinds of Anemones found growing in the cultivated gardens, as well as in the wild of our woods. Some are among the first flowers to bloom along the river banks in the Spring and some bloom even after the early frosts of Autumn have come. All thrive under cool conditions and in many cases the ground should be covered with leafmold to keep it cool. The early blooming varieties such as the European Pasqueflower (*Anemone pulsatilla*) grow about 9 inches high and the purplish flowers are borne in profusion during April. The Pasqueflower is followed by seed pods covered with silky hairs which stay on the plant for a considerable time. But of all the Windflowers the Japanese Anemone (*A. japonica*) is the largest and the best one to grow for our gardens. They begin blooming early in Fall and last until freezing weather cuts them down when only the Cosmos, Dahlias and Chrysanthemums are left. The flowers are pure white, light and dark pink; they grow from 2 feet to 3 feet tall. They seem to thrive best when planted in front of shrubbery, evergreens or walls facing the south where they are protected from the northern winds. Japanese Anemones have a leathery foliage which is dark green on the surface



Japanese Anemones, one of the charming late flowers

and light green on the underside. The flower spikes grow straight and erect from the center of the plant and bear many large, saucer-shaped flowers with a large center of yellow pollen masses. The good varieties are: Whirlwind, white; Queen Charlotte, pink; Geante des Blanchés, white, and Kriemhilde, rose. There are also rosy-reds and crimsons. *A. hupehensis* resembles the *A. japonica* but is smaller and bears rose-colored flowers in early Autumn.

USES. Anemones are charming when used as cut flowers especially when combined with the fine ferns or *Asparagus plumosus*. The dwarf varieties which bloom in the Spring are used in rock gardens,

while the others are used in borders. The Japanese Anemones bloom at a time when flowers are scarce and with slight protection from the early frosts, they will bloom two or three weeks after many other plants are killed.

**CULTURE.** All Anemones like a rich, moist soil, one which is well drained in Winter. The early dwarf varieties will thrive in shady places, but the Japanese Windflowers need sunshine but not in the open. They like lots of water and should be thoroughly soaked with water during a dry season. They need some Winter protection, such as a good covering of leaves. If the plants are moved, it should be in the Spring, but it is best to let them grow undisturbed in the border for a number of years. The ground should be worked deeply and well manured.

**PROPAGATION.** The seed should be sown in the Spring and the plants spaced at 18 inches apart. The best method is to divide the roots in the early Spring. Save even the smallest roots when the plant is dug, because if they are cut into 2-inch lengths and placed in a sandy soil they will produce little plants. When well started these new plants may be placed in their permanent quarters.

## **Anthemis—Camomile (Golden-marguerite)**

This hardy Camomile is a sturdy, very easily grown plant. It is about 1 foot or 1½ feet high, very bushy, with finely cut foliage somewhat resembling the Pyrethrums, and bears Daisylike, yellow flowers in great profusion from June until Fall. The colors range from purest white to a rich yellow. *Anthemis tinctoria kelwayi* is the best one for gardens because it has a particularly long-flowering season. Its flowers are yellow. *A. montana*, a form of *A. tinctoria*, has creamy white flowers.

**USES.** The Camomiles are splendid when planted in masses and are most excellent for hot, dry places. Some of the dwarf forms are used in rockwork. They are used for cut flowers to a great extent.

**CULTURE.** These flowers will grow in almost any kind of soil; in fact, they will succeed in the poorest clay soil. They like a sunny location, although they will bloom in partial shade. The plants should be divided often as they grow and spread very rapidly. It must be frankly admitted that they are apt to overrun a small garden.

**PROPAGATION.** They are easily grown from seed or by division of the roots.

## Aquilegia—Columbine



Long-spurred Columbines

Doth the rock burst into bloom  
 So the bees seek its perfume?  
 Is there somewhere in its breast  
 A spirit roving without rest  
 That doth fabricate  
 This wall of slate  
 Into forms so complicate  
 That but a breath  
 Would bring death  
 They are so frail,  
 So thinly frail?

Ah, the wonder that has run  
 That some sweet alchemy has  
 won—  
 Kissed together stone and sun!  
 O Columbine, the world is  
 thine!

—L. H. BAILEY.

The names of this flower are interesting to the garden lover with imagination. It is called Columbine, some say, because the flowers appear like the cap of a court jester; others have suggested that the spurs of the flowers cause them to appear like a ring of doves (*Colombo*) about a dish. And its name *Aquilegia*, is it from *agui legus*, to draw water, or from *aquila*, an eagle? Both derivations would be apt, for the *Aquilegia* appears to draw water from the rocks upon which it grows in the wild and the shape of the flower suggests the talons of an eagle.

**SPECIES.** American Columbine (*Aquilegia canadensis*). This is the common species native to the eastern states. The flowers are red and yellow, and the spurs are medium short. It increases rapidly by self-sowing its seeds.

Colorado or Rocky Mountain Columbine (*A. caerulea*). A most beautiful sort which in its wild form has white petals and usually white sepals and long blue spurs. It is a native of the Western States and is found at elevations of from 7,000 to 10,000 feet. As a parent it has produced many excellent white, pink and blue varieties.

Golden Columbine (*A. chrysantha*). A yellow sort with long spurs, blooming somewhat later than the other sorts. It has been much used as a parent for long-spurred hybrids.

European Columbine (*A. vulgaris*). This is a European species with bright lilac flowers, although its white form, Munstead White or *nivea* is most commonly grown. It is a dwarf sort, 1½ feet tall and with stout, curved spurs. This variety has the best foliage of any Columbine.

USES. Most species are excellent for the rock garden, as well as for the herbaceous border, where they make clumps sometimes 2 feet in diameter. It is difficult to arrange Columbines as cut flowers, they seem to strangle each other. When a truly exquisite effect is desired, cut a single truss of bloom and place it in a vase by itself.

CULTURE AND PROPAGATION. Aquilegias bloom in from 12 to 15 months from seed; in other words, they rarely or never bloom the first year when the seed is sown in the open border. When sown in August of one year they will bloom nicely the next year. The seedlings prefer a warm, sandy soil. The addition of leafmold to heavy clay soils is preferable to using manure.

The seed sometimes germinates irregularly. The plants make little growth during the hot Summer from Spring-sown seed. Large plants may be divided in September.

It might be advisable for the amateur gardener to buy plants of the various sorts which, if planted together, will cross to form many hybrids. On the other hand, if one wishes to keep them pure, he should not plant the various sorts together.

Most Columbines do well in the sun but will stand some shade.

## Arabis—Rockcress (Wallcress)

The Rockcress is a small, white, four-petaled flower and its masses of snowy bloom early in the Spring contrast beautifully with the Dwarf Goldentuft (*Alyssum saxatile compactum*) and the blue False-wallcress (*Aubretia*). It blooms very soon after the snow disappears and the flowers are so numerous that when a plant is in bloom, no foliage is visible. The foliage is gray and the plant attains a height of 6 inches. It is of a spreading nature and the stems form a dense mat about a foot across which blooms continuously from very early Spring through May. *Arabis alpina* is the commonest form grown but *A. albida* is a better bloomer. Both have white flowers. There is a soft pink sort (*A. aubrietoides*) which sometimes winterkills.





**Arabis or Rockcress.** Masses of white flowers in a rockery or border are attractive

for the next year's bloom. *A. aubrietoides* is best wintered in a cold-frame.

**PROPAGATION.** Rockcress is propagated by seeds or by dividing the plants or by rooting cuttings of the trailing shoots in late Spring.

## **Artemisia—Wormwood, Mugwort, Southernwood, (Mountain-fringe), (Old-man), (Old-woman) (Lads-love)**

This group of plants, as a whole, is not generally valued for its flowers, but all have very ornamental foliage. The Sagebrush is really an *Artemisia* (*A. tridentata*). The plants are almost as hardy as Oaks

**USES.** It is a splendid rock garden plant, growing where it will droop over the rocks. In borders it should be used to cover bare spots. The flowers are sweet-scented and are valuable for cutting purposes. It is a neat plant wherever grown.

**CULTURE.** Any good garden soil will do, provided it is loose and open. *Arabis* is a drought-resistant plant, does not need much water, but requires lots of sun and heat. After blooming the plants should be cut back thus causing them to branch freely and form better plants

yet are very attractive when in bloom from August until frost-time. The flowers are borne on long, graceful stems, divided like a plume, and are either light creamy or yellowish-white in color. The foliage is very finely cut and varies from light gray to dark green.

**SPECIES.** Almond- or Hawthorn-scented Mugwort, *A. vulgaris lactiflora*, is one of the good sorts which grows 5 feet high. Its fragrant flowers are greenish white, produced in late Summer and combine well with Goldenglow, Buddleia, Hardy Asters, Boltonia, Helianthus and many other of the taller Fall blooming perennials.

Southernwood, Old-man (*A. abrotanum*) is one of the old-fashioned border plants. It has yellowish-white flowers and is usually grown for its handsome dark green, pleasant scented leaves.

Beach W., Old-woman (*A. stelleriana*) is of creeping habit with silvery white foliage and is one of the showiest of this type of border plants. It grows rapidly and soon covers a large space.

Cudweed W. (*A. purshiana*) grows about 1½ feet high and has white foliage.

Another white foliage sort has gained considerable prominence of late; it is known as *A. montana* (Piedmont Wormwood). It grows 2 to 3 feet tall and may be dried to be used as an everlasting.

**USES.** Old-woman is much used for carpeting beds or borders. It is good also for the rock garden. The taller plants are



*Artemisia lactiflora* sprays. A tall perennial which does not need a stake

used to fill in the shrubbery or as backgrounds or hedges for the lower growing flowers. The foliage and flowers are sweetly scented and adapt themselves well to pot culture and as such are as decorative as many of the *Acacias* which are prized so much. The blooms also make attractive cut flowers and last well.

**CULTURE.** *Artemisias*, especially *A. v. lactiflora*, like soil which is moist, and it must be rather rich in order to produce good blooms. Free watering and soapsuds have been found to agree with them. They like sun.

**PROPAGATION.** They may be grown from seeds, but are usually propagated by division or by cuttings.

## **Asclepias—Milkweed, Butterflyweed, (Pleurisy-root), (Swallow-wort)**

The common Milkweeds are members of this genus of plants. *Asclepias tuberosa*, the Butterflyweed, is one of the showiest and most beautiful of our native plants. The beautiful, flat-topped clusters of bright orange-red flowers are followed by long, curious pods containing



Butterflyweed or *Asclepias tuberosa*. These orange-red flowers brighten the dry spots on banks or in the border

numerous white, feathery seeds. In the wild state the flowers bloom in August, but the flowering season is prolonged if the plants are given good cultivation. The Swamp Milkweed (*A. incarnata*) is splendid for boggy gardens. It has narrower leaves and clearer pink flowers than the Common Milkweed (*A. syriaca*).

**USES.** The Butterflyweed is nice for sunny spots in the rockery or border. When found wild they are blooming when many of the surrounding plants are dried up.

**CULTURE.** These plants are long-lived and capable of taking care of themselves without any attention. They freeze out in heavy soil and therefore

should have sandy, well-drained soil in full sunlight. The *Asclepias* is a deep rooting plant and dislikes removal very much. One should be careful that it has completed its growth and every root should be saved, if the plants are to be transplanted from one place to another. Transplanting is usually considered difficult, but many persons have reported success if the hole is filled with sand.

**PROPAGATION.** Raising them from seeds is the most certain method of propagation. Sow only a few seeds in a pot of rather firm soil, and allow the young plants, which grow slowly, to remain in these pots for at least a year before setting them out.

### ***Asperula*—Woodruff, (Waldmeister), (Squinancywort)**

Sweet Woodruff (*Asperula odorata*) is a small growing, graceful, sweet-scented herb. It has small, white flowers and deep green, whorled foliage. The flowers and leaves when dried have an odor like new hay and when laid among clothes, perfume them and keep away insects. It grows from 6 inches to 8 inches high and the small flowers appearing among the foliage make an exceedingly pretty picture, inasmuch as the foliage itself is very attractive. This perennial resembles the *Galium* or Bedstraw, of the woods.

**USES.** Sweet Woodruff is fine for cutting purposes, and is used with varieties of the English Ivy for a ground covering among shrubs and under trees. Dried leaves have a very agreeable aromatic odor.

**CULTURE.** It will succeed when planted in clumps if given a partially shaded position.

**PROPAGATION.** It is propagated by division, inasmuch as it has long underground stems, and increases rapidly. The seeds germinate slowly.

### ***Asphodeline*—Jacobs-rod**

The classic *Asphodel* is rarely seen in gardens although its interesting tall and stately spikes of yellow and white flowers are of interest to garden lovers. The *Asphodels* are variously cataloged as *Asphodeline* and *Asphodelus*; the former genus is erect and has leafy stems, the latter is stemless. In *Asphodeline lutea* the flowers are sweet-scented and yellow, the stems are 3 feet to 4 feet tall. The plants bloom in June. In Bailey's "Standard Cyclopedia of Horticulture" we read that this is the plant mentioned by Homer which grows in the meadows of the

dead, where the heroes gathered in Hades. In Greece it is wild and is always associated with waste places and the dead. To us it has no such associations.

Although the name King Spear, is often used for this plant, it is not in good standing, inasmuch as the Desertrcandle or *Eremurus* is also called by that name.

**CULTURE.** The Asphodels are excellent border plants, where they may be grown in partial shade or sun. They are suited to most garden soils.

**PROPAGATION.** The plants are readily divided in Spring or Fall. Seed is advertised in some catalogs.

## Aster—Hardy Aster (Michaelmas-daisy)

The American who reads English books about gardens is thrilled by the love of the British for Michaelmas Daisies. He immediately hunts his own roadsides and delves into catalogs to acquire some of these lovely flowers. For the Wild Asters are truly lovely and are an asset to any garden, many of which bloom at a season when the other flowers are failing and the roadsides are parched after our usual Summer droughts. It is a reflection upon our appreciation of our own native flora to read that there are many selected varieties of Asters, most of which have been produced abroad. In the following table will be found an ample assortment of the commoner Asters, all of which may be grown:

**ACRIS NANUS.** 1-1½ feet. Lavender-blue. Aug.-Sept. Good dwarf.

**ADVANCE.** 4 feet. Lavender. Sept. Free flowering.

**ALPINUS.** ¾ foot. Purplish-blue and white. May-June. Rockery or front of border; very early.

**AMELLUS** (Italian A.) 2 feet. Rich violet. Aug.-Sept.

**AMETHYSTINUS.** 4-5 feet. Amethyst-blue. Oct. Mass of small flowers.

**BEAUTY OF COLWALL.** 3-4 feet. Ageratum-blue. Sept. One of best double.

**CLIMAX.** 5 feet. Lavender-blue. Sept.-Oct. A superb form of *A. novibelgi*.

**CORDIFOLIUS** (Blue Wood A. or Heartleaf A.) 1 foot. Light lilac. Sept. A common wild sort.

**ERICOIDES** (Heath A.) 2 feet. White. Sept. Small leaves common. Wild.

**FELTHAM BLUE.** 2½ feet. Blue. Aug.-Sept. One of best.

**GRANDIFLORUS.** 2-2½ feet. Bluish-violet. Oct.-Nov. Late; a large flower.

**LAEVIS** (Smooth A.) 4 feet. Lilac-lavender. Oct. Neat habit, graceful.

**LIL FARDELL.** 4-5 feet. Mauve. Sept. Showy, form of *novae-angliae*.

**MACROPHYLLUS** (Bigleaf A.) . 4 feet. Lavender-violet. Sept. Dry, shady places.

**MAUVE CUSHION.** 1½ feet. Mauve. Especially good. Late.

**MULTIFLORUS** (Wreath A.) 2 feet. White, small. Oct.-Nov. Late

**NOVAE-ANGLIAE** (New England A.) 3-5 feet. Purple; also a rosy variety. Sept.-Oct.. Common, showy wild sort.

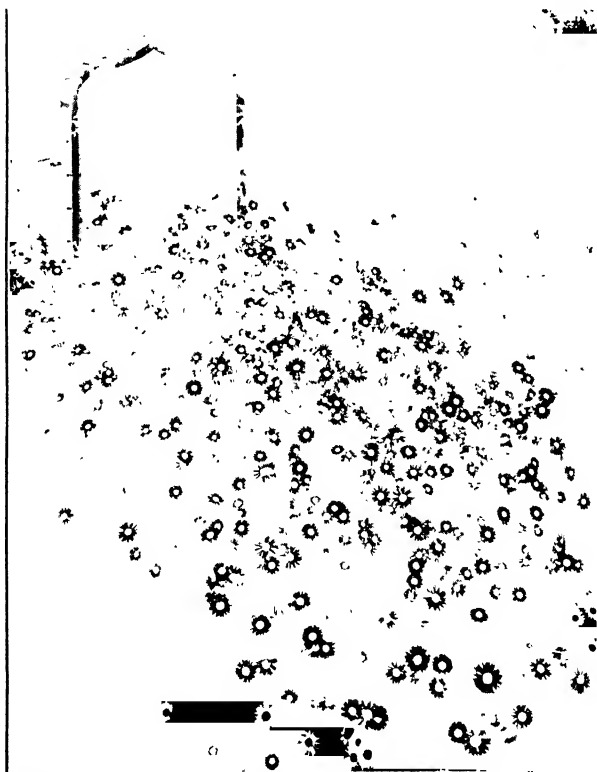
**NOVIBELGI** (N. Y. Aster). 1-3 feet. Blue. Sept.-Oct. Climax and St. Egwyn are forms of this.

**PTARMICOIDES.** 1½ feet. White. Aug. Stiff stems for cut flower.

**ST. EGWYN.** 2½-3 feet. Pink. Sept.-Oct. One of best.

**SUBCAERULEUS.** 1½ feet. Bluish-violet. May-June. Large flowers. Protect plants.

**TATARICUS** (Tatarian A.) 5-6 feet. Violet-blue. Oct. The latest sort; one of tallest.



Wild Asters. A Fall garden without them is incomplete

**USES.** To see the various sorts of Asters is to suggest a hundred uses for them: tall sorts as backgrounds for lower perennials; tall sorts in front of evergreens; tall sorts for woodlands and roadsides; tall sorts for screening fences, ditches; shorter species for bringing a spot of color into the Fall perennial border; all species for cutting and useful for large vases in the home, church or social gathering.

**CULTURE.** No culture is necessary. Plant them and if given extra food and water they repay us; if not they bloom beautifully to shame us for our neglect. Of course, in the garden where neatness is necessary, we do stake the tall sorts. They seem to grow well either in full sun or partial shade.

**PROPAGATION.** Cut up the clumps as often as you think of it. They multiply rapidly and one always has a few plants to give to a friend.

### **Aubrietia—(Purple-rockcress), (False-wallcress)**

Early in the Spring our eyes search for color in the garden. We grow the Rockcress (*Arabis*) for white, Goldentuft for yellow and Aubrietia for purple, rose and lavender. But as a matter of fact, few persons have grown the Aubrietias because they have not known of them although the catalogs list the plants.

**USES.** They are useful in the front line of a well-drained perennial border or for the rock garden as well as dry walls or between stones of random flagging.

**CULTURE.** They prefer the lighter soils, being less hardy than *Arabis*, and full sun. Transplant in Fall or earliest Spring, for at other times they are impatient of being moved.

**PROPAGATION.** Divide the plants in the Fall. If seed is obtainable, they may be easily started from seed. Cuttings may be taken in the early Fall.

### **Baptisia—Wild-indigo (False-indigo)**

The Wild-indigo is a strong growing plant with yellow, white and dark blue flowers which somewhat resemble the Lupine, being pea-shaped. The flowers grow on a spike about 6 inches long. False-indigo (*B. australis*) grows about 3 feet high, has dark blue flowers and dark bluish-green leaves cut very deeply to form three oval leaflets. Yellow Wild-indigo (*B. tinctoria*) has short leaves and bright yellow flowers. It grows from 2 feet to 4 feet high. These plants bloom from May through July.

**USES.** These are very striking plants for the border because of the excellent spikes of blue or yellow color. They are also good in the wild garden. Where Lupines are not successful, the Baptisia thrives excellently.

**CULTURE.** Baptisias should be planted in full sunlight, otherwise they prove to be shy in blooming. They will stand dry, sandy soils.

**PROPAGATION.** They are usually propagated from seeds and division of the plants which are very woody at the crown. The seeds should be sown as soon as they are gathered and wintered over in the coldframe, where they will germinate the following Spring. The plants grow very slowly when young and are generally considered difficult to transplant.

## Bellis—English Daisy (Herb-margaret)

The Daisy of Europe is the one of which we speak here. Who has not read the words of Burns and Wordsworth, and having read, who has not admired these charming button-like flowers the more? Let us read again several stanzas of Burns:

### TO A MOUNTAIN DAISY

On turning one down with the plow.

Wee, modest, crimson-tippe'd flower,  
Thou's met me in an evil hour;  
For I maun crush amang the stoure\*  
Thy slender stem;  
To spare thee now is past my power,  
Thou bonnie gem.

Cauld blew the bitter biting north  
Upon thy early, humble birth,  
Yet cheerfully thou glinted† forth  
Amid the storm,  
Scarce reared above the parent earth  
Thy tender form.

\*Stoure—means dust.

†Glinted—means peeped.

With the Tulips in the early days of Spring the English Daisy (*Bellis perennis*) starts to produce its single or double white, pink, rose and red flowers upon its low plants, which seldom grow over 3 inches tall. Although they bloom quickly in the Spring, the finest flowers are produced in the Fall when it is cooler.





*Left, Wild-indigo or Baptisia, a blue, pea-shaped flower of May; right, English Daisy or Bellis, cheery edging plants*

**USES.** They are combined with Pansies and Forget-me-nots and are also used as a ground cover for Hyacinths, Tulips, and other bulbs, either in the rock garden, as an edging for borders, or in the early window boxes.

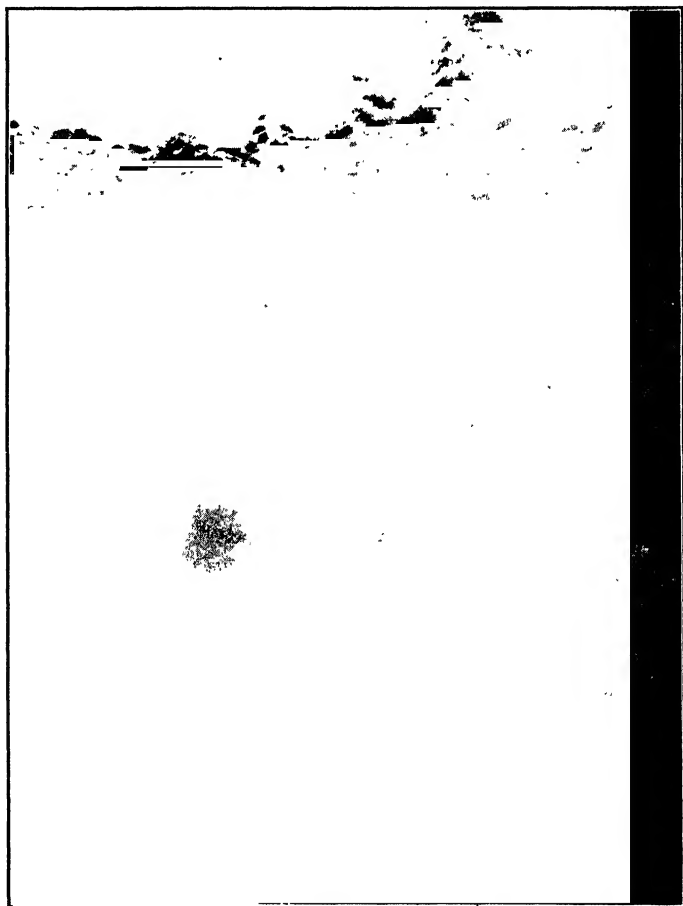
**CULTURE.** The hot weather is very severe on the English Daisies. They should be planted 6 inches apart each way in cool soil. They should be protected in the Winter and if they are kept in coldframes, will bloom during the Winter as do Pansies and Violets.

**PROPAGATION.** The finer English Daisies are propagated by division in the Fall. They grow easily from seed which should be sown in August in coldframes, where they should be kept during the Winter.

### **Bocconia—Plumepoppy (Tree-celandine)**

The Plumepoppy (*Bocconia cordata*) is perhaps one of the most imposing plants of the hardy border, for it grows from 6 feet to 10 feet high. In general aspect the plant is grayish-green in color with very large and deeply cut leaves. The flowers are not very conspicuous

but form huge plumes of feathery, small, creamy white blooms. Other varieties have leaves which are silvery under the surface and small white flowers which are red when in bud. The flowering season of the Bocconias is during the Summer months, July and August, but the plumes remain attractive until cut by frost.



**Plumepoppy or Bocconia well planted**

**USES.** The silvery foliage counts as white in the garden; hence, the Plumepoppy can be used where white clumps are needed. It seems adapted to wet places, is good as a specimen plant, and is excellent for the rear of borders, or to plant in front of tall shrubbery. It can also be used for centers of beds of flowers.

**CULTURE.** The Plumepoppy requires lots of sunlight and a rich soil seems to promote the production of large specimen clumps, but they will grow in any good soil.

**PROPAGATION.** *Bocconia* plants grow easily from seed and attain a height of 3 feet to 4 feet the first year. They may be divided and should be confined, because the plants sucker very badly and will soon spread throughout the garden.

## **Boltonia (False-starwort)**

The *Boltonias* bloom at the same time and resemble some of the hardy *Asters* of the garden and woodland. The leaves are long and grayish and in these characteristics are roughly distinguished from the perennial *Aster*, or Michaelmas-daisies.

The catalogs commonly list three sorts: *B. asteroides*, a tall, white sort growing 4 feet to 5 feet tall, blooming in August and September; *B. latisquama*, which is similar to the former sort but with pinkish lavender flowers; and *B. latisquama nana* which grows only 2 feet tall. The colors are not strictly the distinguishing characteristics, but as the catalogs usually agree, we shall pass on to add that the flowers of *B. latisquama* are generally larger than those of the first species.

**USES.** The *Boltonias*, because of their great height, are highly desirable in large perennial borders because the plants literally bear thousands of starlike flowers. They serve excellently as cut flowers.

**CULTURE.** The plants are of the simplest culture, taking care of themselves when established. Sometimes when the soil is rich, they grow a bit too tall for their strength. Their appearance is then improved by staking.

**PROPAGATION.** The seeds usually grow successfully, but the plants are readily divided into pieces in the Spring. Frequent division is advisable, as the plants reproduce rapidly.

## Cactus, Hardy—Opuntia, Echinocactus

The Cacti, as everyone knows, are plants with thick, fleshy stems covered with spines, for usually there are no leaves. The Opuntias which are perhaps the most common ones grown in the northern states, have large and flat branches. They have many colored spines and exquisite flowers. The spines are black, brown, purple, yellow or straw colored and white, while the flowers are pale pink and yellow. The Comanche Pricklypear (*O. camanchica*) has large yellow flowers and purple fruit. The Snowball or Hedgehog Cactus (*Pediocactus, Echinocactus simpsoni*) is very small and grows into a globe with pale pink flowers. Other hardy Opuntias are *O. vulgaris*, *O. phaeacantha*, *O. polyacantha*, *O. arenaria* and *O. rafinesqui*.

**USES.** The hardy Cacti are used mostly in the rock gardens, although many of them are used in the borders and in dry, rocky places.

**CULTURE.** Cacti require a light, open and porous soil, containing lots of leafmold, loam and sand. There should also be enough lime present to keep the soil from souring. They need water in the Summer but not during the Winter. Plant them in full sun.

**PROPAGATION.** They are propagated by seeds and cuttings taken from the old wood rather than using the soft stems.

## Callirhoë—Poppy-mallow

The Poppy-mallow has long, trailing stems with many saucer-shaped or Poppy-shaped flowers. These flowers are borne in the axils of the leaves and vary in color from rosy crimson to cherry red and rose, with white centers. *Callirhoë involucrata* is the most useful species and blooms all during the Summer and early Fall. The leaves are five- to seven-lobed and hairy. Height 6 inches to 8 inches.

**USES.** The Poppy-mallow is good for small borders, for the rock garden or any place with absolute drainage. It is excellent planted at the top of a bank or wall. It is also successful in seashore gardens.

**CULTURE.** It is of easiest culture, growing rapidly during the Summer months. It thrives in sunny, dry, sandy positions, where the roots penetrate to a great depth.

**PROPAGATION.** These plants exhaust themselves easily and should be renewed often. They often behave as biennials. They are propagated by seeds and cuttings.

## Campanula—Bellflower, Canterbury-bells, Rampion, Harebell, (Peachbell), (Bluebell)



Canterbury-bells; glorious large bells of pink, purple and white. A biennial

There is hardly a group of flowers which possesses such rare beauty as does the large genus of Campanulas. There are many sorts, some growing 2 inches high and some from 4 feet to 6 feet high, but all have more or less bell-shaped flowers in lovely colors: white, clear pink, blue, rose, purplish-rose, violet-blue and lavender. All of them are desirable and seem to just fit in their various places from the formal border to the rocky ledges of the woods. Most of them bloom during June and July.

The Canterbury-bells (*Campanula medium*) and its Cup-and-saucer variety (*C. calycanthema*) are perhaps the most showy and most satisfac-

tory of the whole group. The flowers are very large, in lovely white, pink, blue and deep purple. The stalks of bloom are about 2 feet tall and they are very effective when planted with the early blooming varieties of Phlox.

The Peachleaf Bellflower (*C. persicifolia*) grows from 2 feet to 3 feet high and its flowers, in blue or white, are more shallow than bell-shaped. It has narrow leaves and is very graceful. Of this species, *moerheimi* is the best white; some sorts are double. Telham Beauty is a larger-flowered blue variety.

The Chimney Bellflower (*C. pyramidalis*) is the tallest one. It sends up long stalks of porcelain-blue and clear white flowers in August and continues blooming for six weeks. When in full bloom, the plant seems to form a perfect pyramid.

Of the dwarfier varieties, which are beautiful and useful in rock gardening, the Carpathian Bellflower (*C. carpatica*) is probably the most popular. It grows in dense tufts, not exceeding 8 inches in width, and

is covered with clear blue flowers borne on wiry stems. Unlike the Canterbury-bells, this sort is perennial.

The Scotch Harebell, the Bluebell of literature, is the *C. rotundifolia*. It is an attractive flower having most dainty little bells of blue which appear during late Spring. This sort is found wild in many of the hills and mountains of our country and possesses a sort of unexcelled daintiness.

*Campanula lactiflora*, a white Bellflower and its blue variety is a good one. Small bells are produced upon erect stems for a long period. It has broad, wrinkled leaves.

**USES.** The uses are almost as varied as the numerous forms. The dwarfer varieties are especially suited for small borders, for baskets and the rock garden. The tall ones, especially the Chimney Bellflower, are adaptable for pot culture or as specimen plants and make a beautiful decoration for the terrace or porch. The other varieties are excellent in the border or to use as cut flowers

**CULTURE.** Campanulas should be given full sunlight and should not be crowded in the beds. The taller varieties need staking to prevent injury from the high winds. They like a good, rich soil, and in the Spring a little fine manure and some bonemeal should be dug around each plant. Most of the varieties, especially the taller ones, need Winter protection, for if allowed to stand naturally, the heavy snows will flatten the crown of leaves to the ground, causing it to decay.



Showing how the Peachleaf  
Bellflower doubles its  
petalare



*Upper left, Poppy-mallow or Callirhoe, spreading its mat of color over the soil all Summer; lower left, Turtlehead or Chelone, a wild flower to introduce to the garden; upper right, Clematis, a blue sort which does not produce a vine; lower right, Carpathian Harebell, a Bellflower of use for edging.*

Forest leaves should be packed between the plants, holding the leaves of the *Campanula* together with one hand. Evergreen boughs, straw or hay will serve for the dwarfer ones. In many climates it is best to keep the plants in a coldframe for the Winter. If the flowers are cut immediately upon fading, the blooming season can be prolonged for several weeks.

**PROPAGATION.** Most of the *Campanulas* are biennials. For this reason seed must be sown each year in order to have plants which will bloom the next year. A mistake, commonly made, is in sowing the seed too late. It should be sown any time from May until August, according to the variety, in rich soil which has been carefully prepared, and it should be watered daily. The plants should be hardened gradually, after they have been wintered over in coldframes, and can be removed to the open ground in May. The rows should be 12 inches apart, with an almost equal amount of space between the plants. *Campanulas* are also propagated by cuttings and division.

### **Cassia—Wild (American) (Indian) Senna**

A bold perennial for large masses, *Cassia marilandica* is an attractive addition to the large perennial border. The flowers are pea-like, yellow, with a dark center and are borne in large clusters. The leaves are locust-like; that is, they are finely divided. The plants grow 4 feet to 8 feet tall and bloom in August and September.

**USES.** Large masses planted among shrubbery or in a wide perennial border are attractive. It may even be used as a hedge, for the plants are rather woody.

**CULTURE.** Give the plants sun, and if a moist soil is available, they will be at home in it.

**PROPAGATION.** *Cassias* produce a large quantity of seed which grows readily if sown as soon as ripe. The woody clumps may be divided with a hatchet.

### **Centaurea—Knapweed, Cornflower, Mountain-bluet (Hardheads)**

The *Centaureas* are some of the most graceful flowers to grow in any garden. The flower heads are like showy, ragged thistle blooms of



bright red, deep purple, golden yellow and blue. They grow from 2 feet to 3½ feet tall and bloom during the Spring and Summer months.

**SPECIES.** The Mountain-blue (*C. montana*) has numerous deep blue, rose or white flowers somewhat resembling the annual Cornflower and grows 1½ feet tall. Prized because of its early bloom.

The Persian Centaurea (*C. dealbata*) has flowers which are lilac-pink to white in the center, or a bright red. The leaves are deeply lobed. This species seems to attract the birds when the seed is ripe, thus making it hard to save the seed.

The Globe or Golden Centaurea (*Centaurea macrocephala*) is perhaps the showiest of all because the thistlelike, golden yellow flower heads are very large. The plant itself is an erect and somewhat spindly grower because the stems are so stiff.

*C. babylonica* is a whitish perennial with yellow flowers which grows at least 3 feet tall.

Several of the species are known as Dusty-millers; the foliage is white throughout the Summer. *C. cineraria* (cataloged as *candidissima*) has less divided leaves than the other common species, *C. gymnocarpa*, but the leaves are usually whiter.

**USES.** Centaureas are used for the perennial border, for pots, baskets and the rock garden. Most of these plants produce long-stemmed and lasting flowers which are admirable for cutting.

The Dusty-millers have a real place in the garden for there is no contrast so charming as that between the bright colors of most perennials and the gray or whitish leaves of these plants. They may be clipped low as edging plants.

**CULTURE.** Centaureas are of very easy culture. They bloom best when planted in an open, sunny position, with any good garden soil. Clip back the Dusty-millers to keep them at the desired height and form. The blooms are not valuable.

**PROPAGATION.** They are propagated from seeds, although some of the sorts may be readily divided. The Dusty-millers are increased both by seeds and cuttings. *C. montana* spreads so rapidly by underground stems as to become too abundant unless kept in check.

### **Cerastium—Snow-in-summer (Mouse-ear Chickweed) (Snowplant)**

Snow-in-summer is surely a very descriptive name for this low growing, white-flowered and silvery-foliaged plant. There are myriads of small white flowers produced in June forming a dense mat of growth.

*Cerastium tomentosum* is the common species and grows about 6 inches high. *C. biebersteini* is very similar but grows a little taller and has larger flowers and is less gray. *C. arvense* is a green-leaved species and stands the hot Summers better than the other two. For the rockery this latter sort spreads too rampantly.

**USES.** These plants are invaluable for the rockery or as an edging for beds and borders. They are also excellent to plant in dry, sunny places as a carpet covering for graves or steep banks. The leaves are as valuable as the flower, as if one prefers to keep the compact appearance of the plants, it is wise to remove the flower buds.

**CULTURE.** The plants are very easily grown in any soil.

**PROPAGATION.** They are propagated by seeds, cuttings or divisions of the plant. The plant should be divided very early in the season, either with or without roots, and planted deeply in well firmed soil which should be kept moist until roots have formed.

## Ceratostigma—Plumbago (Leadwort)

*Ceratostigma plumbaginoides*, or *Plumbago larpentae*, is one of the very late blooming small border plants. Because it is so persistently in bloom from July until freezing weather in the Winter, it is very much valued at the time of the year when most other border plants have finished blooming. The Larpente Plumbago grows about 10 inches or 12 inches high and forms a round, ball-like mass of dark green, glossy foliage which in the Fall months is covered with trusses of lovely cobalt-blue flowers on wiry stems, which last for a long time.

**USES.** *Plumbago larpentae* is especially useful as a rock garden plant because the foliage turns a reddish-bronze in Autumn and lasts so long



**Ceratostigma or Plumbago, one of the best late blue edging plants**

that, with the deep, glossy green foliage of early Spring, it makes a good all-the-year-round plant. This perennial is also used in borders and as an edging plant.

**CULTURE.** In the colder regions the plants need protection during the Winter, unless they are planted in well-drained rockeries. The plants may be taken from the ground and placed in coldframes. They grow well in sunny places and in any good garden soil.

**PROPAGATION.** The plants are usually propagated by dividing the roots in Spring.

### **Chelone—Turtlehead (Shellflower), (Snakehead)**

The Chelone is sometimes confused with the Beardedtongue (Pentstemon), to which it is closely related. It is a late Summer plant, coming into bloom about the middle of August and lasting for six or seven weeks. The White Turtlehead or Shellflower (*Chelone glabra*) is a native and has clusters of flowers of a light creamy white. The plants grow about 3 feet tall. The Pink Turtlehead (*C. lyoni*) has rose-purple flowers which grow from a mass of deep green leaves. The flowers of Chelone are inflated and long, tube-shaped, somewhat resembling the Snapdragon but flatter.

**USES.** Because of their season of bloom and their rather attractive colors, they make good plants for the border, or to plant along streams. S. N. Baxter suggests the Shasta Daisy as an effective foreground companion plant.

**CULTURE.** Chelones thrive best in moist or swampy places, in half shade. They are easy of culture. At blooming time, they should be fertilized or mulched deeply in order to conserve the moisture.

**PROPAGATION.** They are propagated from seeds, cuttings or divisions of the roots made in the Spring.

### **Chrysanthemums, Hardy**

October and November are the months which marshal in the Chrysanthemums and if these months be cold and rainy, the flowers do not develop well, but if the days are warm and the nights frosty, but not freezing, these flowers are in the height of their glory.

"All through the budding Springtime,  
All through the Summer's heat,  
All through the Autumn's glory,  
They hide their blossoms sweet."

There are four sorts of *Chrysanthemums* grown in gardens. The first sort is discussed on page 91 under *Daisies*; the second sort includes such varieties as *Lillian Doty*, both pink and white; *Garza*, a tubular-petaled white; *Mrs. W. E. Buckingham*, a single pink, fragrant, and *Alice Howell*, a single burnt orange, very reliable. These are all florist varieties blooming very late in October and often touched by frost. These and still later varieties are a bit discouraging inasmuch as they bloom properly only one year in five. The third group is properly called the early-flowered *Chrysanthemums*, some blooming in August or early September, but they are not as hardy as the above-mentioned sorts. They are well-wintered in coldframes. The best varieties include *L'Argentuillais*, a chestnut-red; *Glory of Seven Oaks*, an extremely early double golden sort; *Cranfordia* in white, yellow and pink; *Ruth Cummings*, an orange-scarlet; *Mme. Auguste Nonin*, a deep rose; *Goacher's Crimson*, a redder sort than *L'Argentuillais*. The fourth sort comprises the old-fashioned, very hardy varieties generally known only by color, which come so late as to be frozen year after year and, for this reason, universally unsuccessful.

For *Shasta Daisy*, see p. 91; for *Pyrethrum*, see p. 166.

**CULTURE.** *Chrysanthemums* will grow in any garden soil that is rich enough, for they are gross feeders. Buy plants in early Spring or divide old plants and reset each Spring, otherwise, they will become too crowded and impoverish the soil. A good place to plant them is near the foundation wall of a house; in such a situation they are protected somewhat during the Autumn and Winter. Extra large blooms may be produced by feeding with liquid manure once a week. Larger flowers may be secured by pinching off most of the smaller buds on each stem. When the plants make too rank a growth early in the season they may be cut back to cause them to branch and become more compact. If the plants are thoroughly soaked with water once or twice a week during the hot Summer, they will please us by producing better buds and flowers.

Protect the plants during the Fall rains and from the frost with a canvas covering. *Chrysanthemums* have to be supported by tying to stakes or to wires stretched horizontally above the bed. Cover with a light mulch during the Winter. The mulch should be more of the nature of a sun shade rather than a warm covering. It is easy to suffocate the plants.

The plants are frequently troubled with mildew which can be prevented from spreading by dusting with sulphur early in the morning when the dew is on the plants. If this is neglected and the plants become too tall and bare at the base, cut back the plants in August

even though most of the leaves are removed. They will sprout out and bloom nicely.

Plants affected with lice should be sprayed every few days with Black leaf 40 or some other tobacco extract until the bugs are all killed.

**PROPAGATION.** The simplest method of increasing the number of plants is to divide them in Spring. One can make cuttings, however, of the tops of the growing plants.

### **Cimicifuga—Bugbane (Bugwort), (Virginia Snakeroot), (Black Cohosh)**

To all persons who are familiar with the common wild or native woodland plants, the Bugbane is well known. This common denizen of woody places (*Cimicifuga racemosa*) is a very tall, late blooming plant, growing from 4 feet to 8 feet tall and flowering in June. The large leaves are cut very deeply and the flowers, small, white, feathery and closely set, are borne on long stalks. Often over 18 inches of the stem is in bloom at one time. *C. dahurica* has long spikes of creamy-white flowers in September and grows about 6 feet tall. *C. foetida* var. *simplex* is the latest sort and does not bloom until October, and its graceful stems of white flowers are only 2 feet or 3 feet high. The long-flowering stems of all the Bugbanes droop slightly and give the plant an appearance of dignity and stateliness. The buds are like large pearls.

**USES.** All of the Bugbanes are suited to moist and shaded positions, and because of this, they naturalize themselves very easily along the edge of woodlands. The taller species are well suited for planting at the back of borders. All are good to use for cut flowers, but *C. foetida* var. *simplex* is especially so, because its flowers last longer when cut. The flowers have a bad odor if one gets too close to them.

**CULTURE.** Cimicifugas like moist conditions which are partly shaded, but they will endure the sun and for this reason they deserve wider cultivation. They thrive best in rich, leafmold soils.

**PROPAGATION.** They are propagated by division of the plant or by seeds sown as soon as ripe.

### **Clematis—Herbaceous Clematis**

We shall speak here not of the climbing Clematis, but of the lower growing sorts useful for massing, all of which form dense bushes 2 feet or 3 feet tall.

*Clematis heracleaefolia* var.  *davidiana*, the Tube C., blooms nearly all Summer, has Hyacinth-like, bell-shaped, pale blue or lavender-blue

flowers in small clusters, which are very fragrant. *C. recta*, the Ground C. grows 3 feet tall, and has creamy-white, fragrant flowers, opening in June and July. The flowers are not unlike the climber, *C. paniculata*. All of the flower clusters are showy and are followed by fluffy silken seed heads. The leaves stay a bright dark green all Summer.

*C. integrifolia* has undivided leaves and bears blue flowers with a high white center. The plants grow about 18 inches tall.

**USES.** Many of the species are desirable for cutting. In the garden they should be planted in masses or used as specimen plants. *C. recta* is especially valued for large masses of white flowers.

**CULTURE.** These plants are adapted to partial shade. They prefer a loam soil and seem to like lime.

**PROPAGATION.** They are propagated by division of the plants or by cuttings. Internode cuttings are considered preferable to cuttings made with the basal cut through an eye.

## Convallaria—Lily-of-the-valley (Maybells)

The poet has given the name to the Lily-of-the-valley, and the botanist, not as prosaic as usual, has translated the name to the Latin word *Convallaria*.

"No flower amid the garden fairer grows  
Than the sweet Lily of the lowly vale."

**USES.** We must have this favorite with us the year round. In the Winter the florist grows Lily-of-the-valley in the greenhouse for weddings and for bouquets of various sorts. When they bloom in our gardens we cherish them as highly as any other flower for the lapel, the corsage or for the small vase. In the garden they grow in the shady spots where some other flowers become pouty and will not grow. We must remember, however, that good soil, well prepared and heavily fertilized will suit the needs better than planting these lovely flowers under trees which will rob the plants of food, sunshine and a fair degree of moist growing conditions.

**CULTURE.** The culture is of the simplest. Give them shade and enrich the soil with manure applied in the Fall as a mulch. They increase rapidly and need to be replanted every three or four years in order that large flowers may be obtained.

**PROPAGATION.** When old clumps are dug they naturally fall apart and no plant could be easier to propagate. The individual sections of the rhizomes are sold, commercially, under the name of pips.



*Left, Snow-in-summer or Cerastium, snowy masses of white flowers borne upon low plants with white leaves; right, Coreopsis, a well-known flower for cutting*

### Coreopsis—(Tickseed)

Coreopsis is surely one plant that should be in every garden as it is one of the most popular hardy, yellow flowers. The common name, Tickseed, is very appropriate, because the seed of the plant looks like a bug; however, the flowers are exceedingly attractive. They first begin to bloom early in June and are a mass of gold until the frost kills them. The leaves are light green and narrow, while the flowers, which look like a Daisy, are golden yellow in color and measure from 2 inches to 3 inches across. The plant is bushy and spreading and the stems of the flowers are strong, wiry and graceful. *Coreopsis (lanceolata) grandiflora* is the species most worthy of cultivation. The plants attain a height of 3 feet and are especially in their golden glory during June. Perry has recently introduced a semi-double sort which cannot be reliably produced from seed. *C. verticillata*, the Threadleaf C., is a small-flowered species with finely cut foliage. The plants bloom all Summer and grow 12 inches tall, spreading by underground stems.

**Uses.** *C. grandiflora* is invaluable for use as a cut flower on account of its long, wiry, leafless stems. All sorts are good in the border where huge clumps are very showy.

Coreopsis are nearly always planted in front of Delphiniums, and they combine well with Shasta Daisies.

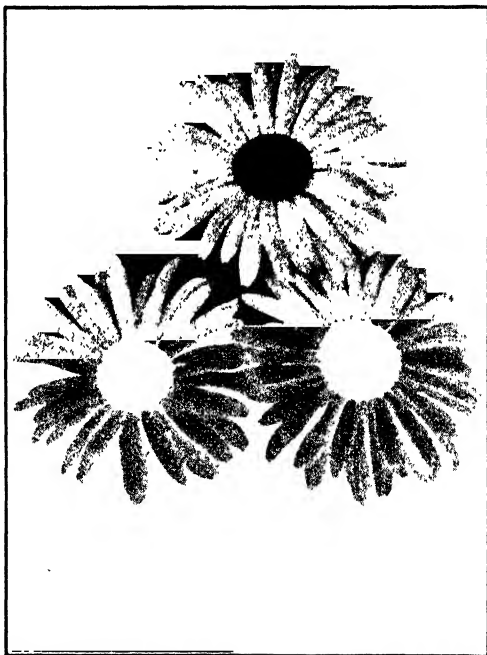
**CULTURE.** They are of easiest culture, but prefer sunlight and rich, damp soil. The flowers must be kept picked in order to insure a long blooming period. If planted in the colder climates, they should have slight Winter protection, such as coarse straw or Pine boughs.

**PROPAGATION.** They are propagated by seeds and division of the plants. If the seeds are sown very early, the plants will bloom the first year, but if they are planted in July or August, the plants will bloom the succeeding year. Seeds should be sown every year, since the older plants tend to get woody and do not bloom as well.

## Daisies

The word "Daisy" was formerly written Day's Eye, and the Daisies are really well named, for there is no season in the garden when some sort of Daisy is not in bloom.

The Shasta Daisy, *Chrysanthemum maximum*, is like a field Daisy seen through a magnifying glass. Most of us like the bright, Daisylike flowers and we are delighted with the Shasta Daisy because it blooms so freely and has long stems useful for cutting. As garden subjects they are low growing and are charming for use



Shasta Daisy, the giant among fortune tellers

as edging plants. There are a number of named varieties, some early, others later, which are chosen for their blooming period as well as their



size and character of petalage. They are readily propagated, both by seeds and division of the plants. Dampness in the Winter, not cold, injures them. If a light covering of straw is given during the Winter they will be well protected, but a thick covering will do more harm than good.

The Arctic Daisy (*C. arcticum*) is a splendid, low growing sort which is hardier than the usual Shasta Daisy and useful for rock walls.

The Giant Daisy (*Chrysanthemum uliginosum*) has a white flower, but differs from the field Daisy in that the plants are 4 feet to 7 feet tall. They are propagated by seeds or division and it is said that they bloom the first year from seed. They are good background perennials and are also useful for cut flowers. Low, moist places are ideal for this Daisy. They are successfully naturalized.

For Painted Lady or Pink Daisy, see *Pyrethrum*, p. 166 and English Daisy, see *Bellis*, p. 75.

### **Daphne—(Garlandflower)**

The sweet scent of the *Daphnes* endears them to the lover of garden gems. These plants are really shrubs, but because of their low growth and general habit, they more closely resemble the herbaceous perennials.

*Daphne cneorum* (Rose D. or Garland Flower). The bright pink, four-parted, fragrant flowers and evergreen leaves combine to make this plant truly beautiful. The plants are hardly a foot tall and bloom in April and in October. In pronouncing this species name the letter "C" is silent.

**USES.** The *Daphne* is adapted to the border and to the rock garden.

**CULTURE.** They grow in full sun or partial shade and light soils. They seem to dislike lime. Give them protection in Winter.

**PROPAGATION.** One can layer branches of the Garlandflower in the Spring.

### **Delphinium—Larkspur**

Old John Parkinson, nearly 300 years ago, wrote "Wee call them in English Larkes heeles, Larkes spurres, Larkes toes or claws." The Larkspur is surely one of the oldest old-fashioned flowers, but it is becoming more popular today than ever. How choice are its colors ! How suggestive is the word "lark" in christening this flower, as the lark comes from the sky, so comes also the color of the Larkspur.

From the azure of the sky to the deep blues of the ocean depths in its range of blue. But blues are not the only colors; there are the pastel shades, not blue, or pink, which suggest the combinations of color in Copenhagen pottery. There are the dainty double pink sorts which suggest magnificent brocades. And what gems we find! Deep sapphires, superb amethysts, subtle turquoises and rich garnets. Like tiny peace doves are the white sorts.

And in form, how diverse! We see the dolphin in the unopen bud. We note a bee gathering nectar from a bloom and find, instead, that it is the hairy petals at its center. We regard the tall spikes and see them covered by countless horns-of-plenty, some of them pouring gold.

USES. Can a garden be planted without Larkspurs? Foliage, flower, habit and all, every garden lover must have them. The tall, the short, the perennial, the annual—they are indispensable in their chosen places. Consider the long season of pleasure at seeing them in full splendor. Day after day in June, July, and often in September, new spikes open their blossoms. Erect and stately against a fence, majestic accents in a mixed border, sturdy and hardy in the cottage garden, as well as modest and delicate in the beds of annuals, the Larkspurs are incomparable. They bloom with Japanese Iris, Madonna Lilies. As a cut flower they are especially admired, the Belladonna sorts being incomparable when combined with Columbia Roses.

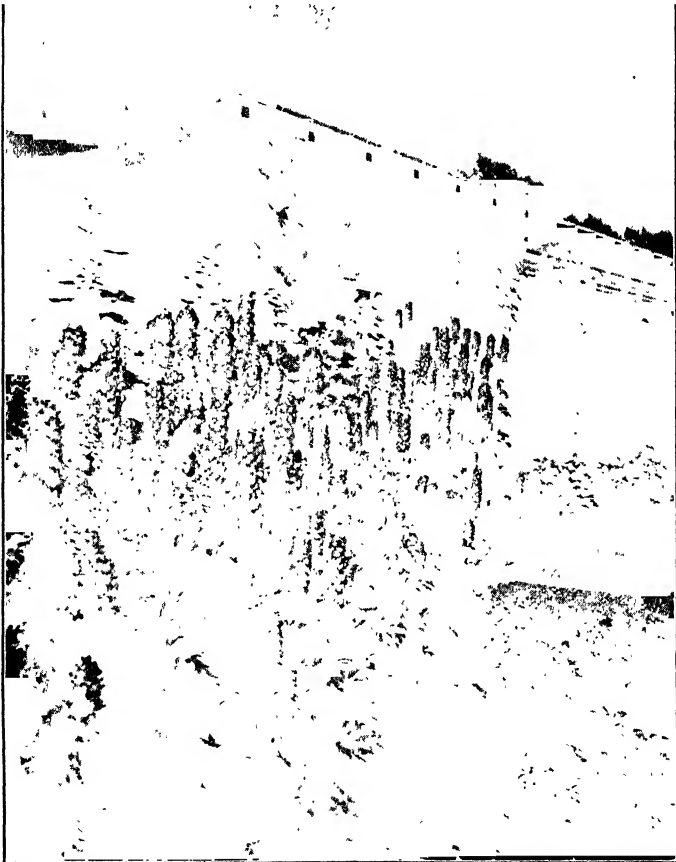
VARIETIES. The catalogs should be consulted for varieties of Larkspurs; there are many very superior named sorts which are improvements in color, form and length of spike over those usually raised from seed.

The modern race has been greatly improved through years of effort, especially in England. Recently we in America are developing varieties of our own which are better suited to our climate.

Besides the tall sorts, the garden lover should note the Chinese Larkspur *Delphinium grandiflorum (chinense)* listed in catalogs. This is a true joy as it blooms throughout the Summer, yielding short stems crowded with white, pink or violet flowers. The Chinese Larkspurs differ from most other perennial sorts by having finely divided leaves. The real enthusiast is tempted by reading the descriptions in the catalogs of certain sorts listed as *Delphinium nudicaule*, a dwarf orange-scarlet, *D. zalil*, a yellow, *D. cardinale*, a bright red. These sorts do not have the robust constitution nor the hardiness of the other kinds but they are worth trying.

CULTURE. Delphiniums like plenty of sun. The soil should be rich, deeply prepared, a cool, friable loam. In heavy clay soil they are

more apt to winterkill. Even hot, sandy soils, if watered and fertilized, will produce excellent results. Moisture will increase the size of the flowers and spikes, but it is not necessary to give the plants excess water when in bud or bloom unless they seem to be suffering. Cultivate the plants constantly with the hoe. It may be well to give the plants a little liquid manure just as the flower stalks start to grow. Many of the taller sorts are benefited by being staked, but this is best done



A "noble clump" of hardy Larkspur

before they actually need it. If the plants are cut back after blooming, cut the stalks just below the flower cluster. When this stem becomes unsightly, cut it back to within a few inches of the soil. Give a period of rest, during which they are neither watered nor cultivated, then if given bonemeal and an abundance of water, they will send up a second crop of bloom in the Fall. Some persons believe that this weakens the plants. No seed should be allowed to form to keep the plants in a blooming condition. If the soil is not perfectly drained, dig up the plants and set them into a coldframe for the Winter.

**TROUBLES.** Some of the best sorts are frequently troubled with leaf spots and stem rots so that they sometimes live only a few years. Dig dry Bordeaux Mixture about the crowns or spray weekly with ammoniacal copper carbonate. In fact, keep the plants covered with this spray from early Spring until Fall. If you suspect that disease is in your soil, use bonemeal as a fertilizer, but never use manure. At the N. Y. Experiment Station it was found that cutting the plants down in August and spraying the soil and stalks with mercuric chloride solution (1 to 2000) proved effective.

Mr. Clifford Runyan has found that the so-called blight is really due to mite injury. The flower spikes become brittle, discolored and the flowers refuse to open. As soon as the plants are up about 6 inches, spray with Volck or nicotine compounds. Furthermore, it might be well to cut off the infested stems of the plants.

Sometimes cutworms and slugs eat the crowns of Delphiniums, so that it is wise to cover the crowns of the plants with ashes at the approach of Winter. Also use a poisoned bait spread at intervals near the plants.

**PROPAGATION.** Larkspur seed over a year old will not grow. Except for *D. grandiflorum*, the Chinese Larkspur, the seedlings will not produce flowers the first year unless sown in March in a hotbed or sunny window. Usually, however, fresh seed is sown in August, in which case they will bloom the next year.

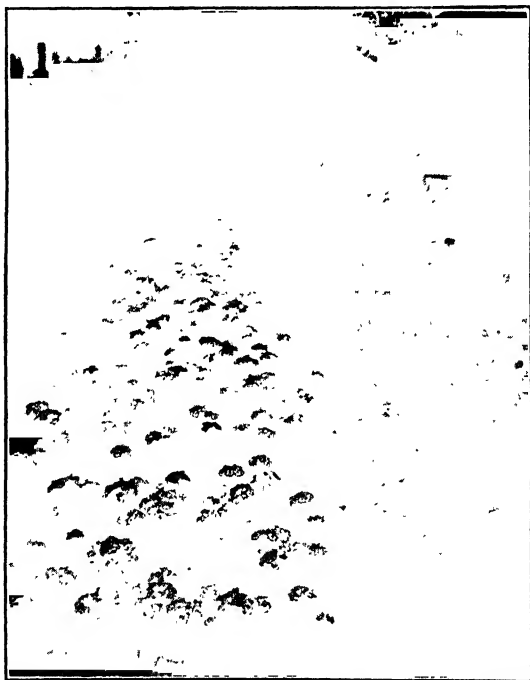
Divide the plants every three or four years in order to keep them from exhausting the soil and becoming too compact in growth. Greater success attends Spring division just after growth starts.

The named varieties and double sorts, which produce no seed, may be rooted from cuttings. Some persons are successful in rooting these in frames during Spring. Samuel N. Baxter advises burying the cuttings in a heap of soil, head first, with only the cut ends exposed. The drying of the wounds for several days causes them to root more easily. Commercially it is wise to choose two-year plants dug in the

Fall; heel in a coldframe until January; then set into a greenhouse bench in a house of a temperature of 50 deg. When the shoots are 3 or 4 inches long, take cuttings, but do not wait until the stems become hollow. It takes four weeks to root in sand at a temperature of 50 deg. The young plants can be topped later in the Spring and another batch of cuttings rooted.

**Dianthus—Hardy Pinks, Sweet-william, Maiden Pink, Grass Pink, (Pheasantseye Pink), Chinese Pink, (Picotee), Carnation, Clove Pink**

The Pinks and the Sweet-williams are still one of the old-fashioned favorites for the garden. There are many species and varieties, nearly all of which make dense tufts of grasslike growth.



**Sweet-william, an old favorite appearing at its best**



Clove Pink. Incomparable for edging

The Sweet-william (*Dianthus barbatus*) is gorgeous when in bloom. The early English writers used to tell us that the narrow-leaved varieties were called Sweet-johns and the broad-leaved sorts Sweet-williams. However, the sweetness and beauty of the flowers compensate for the lack of knowledge about their namesakes. The color scheme ranges from purest white to blackest red with an infinite number of variations and combinations of colors. The pink sort, known as Newport Pink, is a very desirable one with a distinct new color which florists call watermelon-pink or salmony-rose. Scarlet Beauty is another good variety, described by its name. The Sweet-williams grow from 1 foot to 1½ feet tall and bloom all Summer. The flowers are arranged in large clusters of bloom and those which are ringed and spotted are very novel.

The Grass or Garden Pinks (*D. plumarius*) are low growing plants which bloom in early Spring. The single and double flowers have fringed or jagged petals and are very fragrant. The colors range from white to bright scarlet and are very dainty, growing above a dense tuft of gray-green, grasslike leaves.

The Chinese Pink (*D. chinensis*, var. *heddewigi*) is a biennial; that is, the seeds must be planted every year in order to have flowers

the next. They also have a wide range of color and markings and are very popular. The double forms are especially attractive and the petals are often deeply and oddly cut. These sorts lack fragrance. They bloom later than the others and last until frost-time.

Another interesting sort with flowers much like a Carnation is *D. latifolius atrococcineus*, the Double Cluster P. or Everblooming Sweet-william, which has intense crimson, double flowers. The plants grow 18 inches tall and are constantly in bloom in Summer.

Among the dwarf varieties are found the Maiden Pink (*D. deltoides*), a dwarf trailer with rosy-pink or white flowers which open from June to August.

Resembling the Carnation, there is a race of excellent Pinks, the Allwood strain, which bears strong stems and well formed and bright colored flowers. It is cataloged under such names as Harold, Jean, Robert and Mary. In some of the regions with open Winters this strain is not as hardy as desired.

USES. The Pinks are very fragrant and free bloomers. They are good for cutting, and for the rock garden, together with the dwarfer sorts. All are good for edgings or to use in borders.

CULTURE. All of the above Pinks are of easy culture and except for the Sweet-william and the Chinese Pinks, last for many years. All like a warm soil and one that will not become too wet at any time. The plants will die out quickly if the soil is not well drained. They should be divided often, else the plants will choke themselves out. The Sweet-william should be treated as a biennial, sowing the seed each year. When not propagated each year the plants and flowers are not as large.

PROPAGATION. These plants often self-sow. They are all readily propagated from seeds sown in rich soil in April or May, although good-sized plants may be grown from seed sown in Midsummer. The double sorts must be propagated from cuttings if they are to come true. Layering has proven the easiest and surest way of propagating the Grass Pinks (*D. plumarius*).

## **Dicentra (Dielytra) (Bikukulla)—Includes Bleedingheart, Squirrelcorn, Dutchmans-breeches**

The grace of the Dicentras charms us whether in the woods or the garden.

The Bleedingheart or Lyreflower, (*Dicentra (Dielytra) spectabilis*) is one of our most showy old-fashioned flowers which everyone loves.

It grows from 2 feet to 4 feet tall and spreads out almost the same distance. The leaves, which are a light, transparent green, are very neat, exceedingly graceful and very fernlike. The flowers are heart-shaped, varying from a light pink to a rosy-crimson in color, and are produced in sprays along the stems. Have you ever taken one of these flowers apart to discover many interesting things—the two rabbits, a harp, grandpa's glasses and a bottle? The Bleedingheart is closely related to many of our daintiest woodland flowers.

The Squirrelcorn (*D. canadensis*) has small tubers resembling a kernel of corn, the white flowers tipped with rose. The Dutchmans-breeches (*D. cucullaria*) has white flowers tipped with creamy yellow, the flowers closely resembling their namesake. Both of these sorts are natives.

The Fringed, Everblooming or Plumy Bleedingheart (*D. eximia*) is said to have the handsomest foliage of any border plant. Its flowers are rosy-pink and it is in bloom from May through September. It grows 9 to 12 inches tall and is a most worthy plant. As usually supplied by nurseries, *D. formosa* is similar. The other Dicentras bloom earlier—in April, May and June.



Left, Gasplant or Fraxinella, interesting not only for its flowers, but also for its seed capsules; right, Bleedingheart or Dicentra, an old-fashioned flower of quaint charm



**USES.** The Bleedingheart is excellent for the border or margins of shrubbery. It is also grown as a pot plant and it forces so well that it is useful as a window plant. The native, or woodland species, naturalizes beautifully along woodland walks, in the rock garden or in beds of ferns.

**CULTURE.** As soon as the flowers of the *Dicentras*, except *D. eximia*, have finished blooming, the foliage dies down. This makes it difficult to keep track of the various sorts unless they are in locations not easily forgotten. They are very easy of culture, doing well in either shady or sunny positions, although they are more at home in the shade. They like a rich, light soil.

**PROPAGATION.** They are propagated from seeds, division of the roots, or from young shoots which start from the soil in early Spring. These roots should be divided just before they start growth. Just after flowering, the Bleedingheart produces small shoots along the stems, which if removed with a heel, will root readily. Pieces of roots may also be used as root cuttings.

## **Dictamnus—(Fraxinella) (Gasplant), (Burning-bush) (Dittany)**

The Gasplant is surely one of our most interesting plants. The glossy, leathery leaves are dark green and retain their deep color until late in Fall. The white, pink and purplish-brown flowers are borne on spikes 2 feet to 3 feet high. Both the foliage and flowers are fragrant and when the parts are crushed in the hand, they have the fragrance of a lemon. The Gasplant begins blooming shortly after Memorial Day, and the seeds ripen about the middle of August. The whole plant gives off a strong, volatile oil which will give a flash of light if a lighted match is held under the clusters of seed capsules on a sultry Summer evening. This Gasplant (*Dictamnus albus*) is a very strong grower and when once established, many dozen stalks of bloom can be had to a single plant.

**USES.** Because of its large trusses of flowers and fascinating odor, the Gasplant always finds a place in the hardy border, or as a single specimen. They make excellent cut flowers.

**CULTURE.** The Gasplant dislikes disturbance very much. When once planted it should be left in the same position always, for as the plants grow older they will then produce many more and taller flower stems. They require hardly any care, but prefer a rather heavy and moderately rich soil in an open, sunny position. When once established drought does not affect them.

**PROPAGATION.** They are more easily raised from seeds than by root division. The seeds should be sown as soon as they are ripe in the Fall. If the seed is sown in the Spring, pour boiling water over them first, or they will not germinate easily. It often takes four years for the flower spikes to appear on young plants. The roots, being very hard, may be divided with difficulty.

## Digitalis—Foxglove, (Witches-thimbles)

“The Foxglove, in whose drooping bells the bee  
Makes her sweet music.”

—B. CORNWALL.

A well grown Foxglove in full flower is a plant of dignity and beauty. The long flowering spikes grow from 3 feet to 6 feet tall, rising high above large clumps of broad, downy leaves. Upon the flowering stalk, the flowers open slowly as the impulse to bloom moves upward. This tends to lengthen the blooming season. The flowers are tubular or bell-shaped and hang closely on one side of the stem. This arrangement is more apparent than real, for the flowers really originate on all sides of the stem, but the short stems somehow twist around so that they all seem to be on one side. These spikes which are so tall and erect, bear the small, thimble-like flowers in many colors — white, lilac, purple, rose and yel-



A mass of Foxgloves we all may have

low—with odd and various shadings and markings. They bloom in June and July.

*D. purpurea* is the sort, wild in Europe, which bears rosy-purple to white flowers. They are biennials which sometimes bloom for more than a year. The forms commonly cultivated are known as Gloxinia Foxgloves inasmuch as their flowers are more bell-shaped than the wild sort. There is, however an interesting form known as *Monstrosa*, or the Mammoth Foxglove, which has a large, saucer-shaped flower surmounting the spike.

*D. ambigua grandiflora* is the yellow-flowered species. It has smaller, narrower leaves and does not attain the height of *D. purpurea*; it is not as good as the commoner sort.

The Grecian or Woolly Foxglove (*D. lanata*) is an interesting sort with long, dense spikes of small, grayish flowers marked with yellow. This sort does not resemble the other Foxgloves. It is a perennial.

USES. They are planted in masses in the garden among the shrubs, in solid beds, in the border, in the orchard or naturalized on the edge of the woods or along brooks. Wherever they are planted, they give an appearance of strength and dignity. They are excellent for decorations where tall-spiked flowers are needed.

Foxgloves combine beautifully with Sweet-williams and Grass Pinks. A whole border of this combination is suggested.

Foxgloves need no edging plants as their foliage is most attractive, even at the soil.

CULTURE. Foxgloves succeed well in any garden soil which has been enriched with old manure. They naturalize very readily in half-shaded positions, but will grow in full sunlight if the ground is moist. If the main flowering stem is cut after it has finished blooming, many others will come up. Liquid manure should be given to the plants during the flowering season. They require a light Winter protection, which must not be given, however, until after a good freezing of the soil. Dry leaves or pine boughs will serve as a sufficient covering for the foliage. Dampness, either from ill-drained soil or too much mulching, will injure the plants quicker than anything else. The leaves must be kept dry and on mild days plenty of air should be given to prevent sweating and heating.

PROPAGATION. Foxgloves are propagated most easily from seeds which should be sown every year in order to have blooming plants the next year. The Foxgloves are treated as biennials. The seed should be sown in late Summer or Fall and wintered over in the coldframe. When the plants are once established they should not be disturbed, although new plants can be started by root division.

## **Doronicum—Leopardbane**

The Leopardbane is the earliest Daisylike flower and one of the few hardy plants which blossom very early in the Spring and continues into the Autumn. It grows about 2 feet high and has broad, oblong leaves of a rich, soft green color which appear with the first signs of Spring. The single flowers are produced on long, stiff stems and resemble a very large yellow Daisy with a yellow center. *Doronicum plantagineum excelsum* is the most commonly cultivated sort. The flowers are 4 inches in diameter and the plants grow 3 feet to 4 feet tall. They begin to bloom in early Spring and continue through the Summer. *D. caucasicum* grows 12 inches to 18 inches tall. The catalogs also include *D. austriacum* and *D. clusi* as being good sorts.

**USES.** Because of their long, straight stems, they make excellent cut flowers and they last for a number of days when placed in water. Because of their rich golden color, they are splendid for the border, for they begin blooming when yellow flowers are rather scarce. If placed in pots, they can be easily forced into flower during the Winter months for the window garden. They succeed well when planted among the Spring bulbous flowers and shrubs or in the rock garden, and they are equally attractive when planted in masses or when used as single plants.

**CULTURE.** They grow readily anywhere if planted in rich loam and are equally good in shady or sunny positions.

**PROPAGATION.** The plants should be divided soon after they finish flowering. They may also be raised from seed.

## **Echinacea (Brauneria)—Hedgehog-coneflower (Purple Coneflower)**

The bold and hearty character of the Purple Coneflower makes it a striking plant. The flowers are rosy-purple with dark, stiff, quill-like centers touched with golden crimson. *Echinacea purpurea* is the common sort and is frequently listed in catalogs under *Rudbeckia purpurea*. Sometimes when plants are raised from seed objectionable muddy colors are obtained which are not worthy a place in the garden. The plants grow 3 feet to 4 feet tall and bloom from July until frost. The leaves are large and thick.

**USES.** The drooping habit of the rosy-purple petals gives this flower a distinctive character in the border, although the color at best is difficult to combine with other flowers. The plants have a stiff growth.

**CULTURE.** They will tolerate dry, sun-baked locations but are better in good soil.

**PROPAGATION.** The easiest method of increasing these plants is to divide the clumps. From seeds the colors of the flowers are often muddy.

### **Echinops—Globethistle**

The Globethistle is very interesting if one likes thorny, prickly plants. The leaves are large, deeply cut and very prickly. The stems are silver-white, while the flowers are either white or a grayish-metallic-blue. The flower heads are round like a ball and are entirely covered with needlelike thistles. All of the species bloom from June or July through September. *Echinops ritro* has deep, steel blue flowers and grows about 3 feet high. *E. sphaerocephalus* is the tallest growing species, attaining a height of from 5 feet to 7 feet with large, white flowers.

**USES.** All the Globethistles are distinctive plants and are well adapted to plant in borders, among shrubbery or to use as bold specimen plants. The flower heads, which are excellent for cutting, can be dried and will remain attractive for months. They are also suitable for naturalizing in wild gardens.

**CULTURE.** They are of easiest culture, growing best in a light or gravelly soil.

**PROPAGATION.** They are propagated by seeds, root cuttings or division.

### **Edelweiss—Leontopodium**

Everyone knows of the fame of the small Edelweiss of the Alps and every tourist who travels through Switzerland learns the mysterious story of how they grow under overhanging cliffs which means the risk of life when one wishes to get them. But ideal plants can be grown in our own gardens just as easily as any other plant. They are one of the hardiest of plants and withstand severe Winters. The plant is low, growing from 4 inches to 12 inches high, and is densely covered with a whitish wool. The leaves are silvery-gray and lie almost flat on the ground. From the center grows a flower stem which has three or four starlike flowers. The true flowers themselves are small and inconspicuous, but they are surrounded by this starlike cluster of woolly



Upper left, Leopardsbane or *Doronicum*, a glorious, Daisy-like flower of April; upper right, Globethistle or *Echinops*, unique and "something different" for the border; lower left, Gaillardia or Blanketflower, bright and showy flowers in keeping with the Fall season; lower right, Purple Coneflower or *Echinacea*, with high, quill-like center

leaves. This Edelweiss is called *Leontopodium* (*Gnaphalium*) *alpinum*, a sort 6 inches tall, bearing three or four flowers. *L. sibiricum* has flowers twice the size of the Alpine Edelweiss but without the sentimental associations.

USES. This is an ideal plant for the rockery.

CULTURE. If these plants are placed where they will be exposed fully to the sun, they will be a greenish gray, but they will be a creamy white if planted in partial shade. Any good sandy garden soil will do in which some limestone has been mixed. If the plant is placed between two rather closely fitting rocks with plenty of sandy soil beneath, it will succeed nearly as well as it does in the Alps.

PROPAGATION. They are propagated by seeds sown indoors in early Spring to be placed in the open border about the first of May; or by division of the roots in the Fall.

## Epimedium—(Bishopshat), (Barrenwort)

After reading the description of the Epimedium by Miss M. R. Case in "Horticulture," we have decided to abandon all hopes of describing this dainty flower in our own crude words. She writes:

"Blossoming under a great Oak, where Maidenhair and Dicksonia ferns grow to perfection, is a dainty herb from Japan known as the Bishopshat, from the square, flat shape of its blossoms.

"The blossoms are in loose sprays which branch off from the main stems 2 inches below where the main stem divides into the three sprays which bear the leaves. They come in buff or soft yellow, mauve and white. The one which has done the best at Hillcrest, *Epimedium macranthum*, gives the bishop a yellow lining to his dark red hat. It is well arranged for his grace's comfort, as under the square, flat hat is a little cap to hold it well in place. It is so pretty a hat that we hope it is in the ritual of the floral world for it to be worn in the ceremonies of their service.

"The loose spray of blossoms is 6 inches long from where it branches from the main stem. The whole plant is more than a foot in height; the single flowers about the size of a dime. The pretty red buds are on the spray with the flowers.

"The leaves are a soft yellow green, parallel veined and pointed at the apex. The main stem divides into three sprays for the leaves. The whole plant has an airy, unusual and very pleasing effect. The old leaves persist on the stems through the Winter and have to be gathered with the Spring litter from the gardens.

"It should not be confused with the Bishopscap, Mitrewort or Mitella, which more nearly resembles the Tiarella or Foamflower. His Grace, the Bishop, is well adorned in Puritan New England."

Some of the species are *E. alpinum*, with gray, crimson and yellow flowers; *E. macranthum*, with lilac flowers; *E. niveum*, with white flowers, and *E. musschianum*, with golden yellow blossoms.

**USES.** Although these plants should be prized more for foliage than blooms, there is probably no other flower which lasts so long in water as do the Bishopshats. If they are picked close to the ground when the leaves are mature, they will last at least two months in water. They are good for pot plants and for the border where they should really be planted in masses in order that their delicate flowers may be appreciated. They are excellent plants for the rockery. They will serve as ground covers beneath evergreens.

**CULTURE.** They prefer a moist, sandy loam and partial shade. If planted in the rockery, they must not get too dry. The soil should not be disturbed around them at any time, as it injures the roots.

**PROPAGATION.** They are propagated by dividing the roots. This can be done in either Fall or Spring.

## Erigeron—Fleabane

The Erigeron has Asterlike flowers which are in bloom during the Summer months. The different species vary in height from 5 inches to 3 feet. The flowers grow from small tufts of leaves, somewhat like the English Daisy (*Bellis*) and the blooms of the taller varieties measure 2 inches and 2½ inches across. The colors are violet-blue, bright purple, apricot, rose and rosy lavender and these colored petals surround a golden yellow center.

*Erigeron (Stenactis) speciosus* is the commonest cultivated sort. It has bright purple flowers, grows 2 feet tall, and blooms all Summer. *E. glabellus* is a dwarf sort growing from 6 inches to 12 inches tall and with large, light purple flowers. All of the Erigerons spread to form dense bushes of growth and the flowers are in groups of from three to five to a stem or head.

**USES.** The Erigerons are fine to use for cut flowers and are used in the hardy border. The smaller kinds are excellent for rockwork and the front of borders.

**CULTURE.** When planted so that they get some shade during the middle of the day, they will continue to bloom for a longer season.

**PROPAGATION.** The simple method of propagating the Erigerons is to divide the clumps in Spring. Even early Spring-sown seed results in good bloom the first season.



## **Eryngium—Eryngo, Seaholly, (Ivorythistle)**

This is a prickly plant in every feature—the leaves are prickly, the flower heads are surrounded by spreading, prickly floral bracts and the flower head itself is like a small Teazle. The beauty of this plant depends upon the blue-gray effect which it presents. They grow to a height of 3 feet and bloom from June to September.

*Eryngium amethystinum* has amethyst-colored flowers and grows at least 2 feet tall. *E. planum* has numerous small flower heads and shining stems. *E. maritimum*, the true Seaholly, has whitish or pale blue flowers and grows 1 foot tall. *E. oliverianum* grows 3 feet tall and has large flower heads of deep blue flowers.

**USES.** The Eryngium is most effective in a perennial border or rockery, and its uses as a cut flower are many. It is very decorative for basket work, or combined in vases with Gladiolus. The branches can be dried, so that the flowers can be used in Winter bouquets. The plants are used in wild gardens.

**CULTURE.** Eryngiums thrive best in full sun, in light, sandy loam. They withstand dry seasons well and when once established should not be moved often.

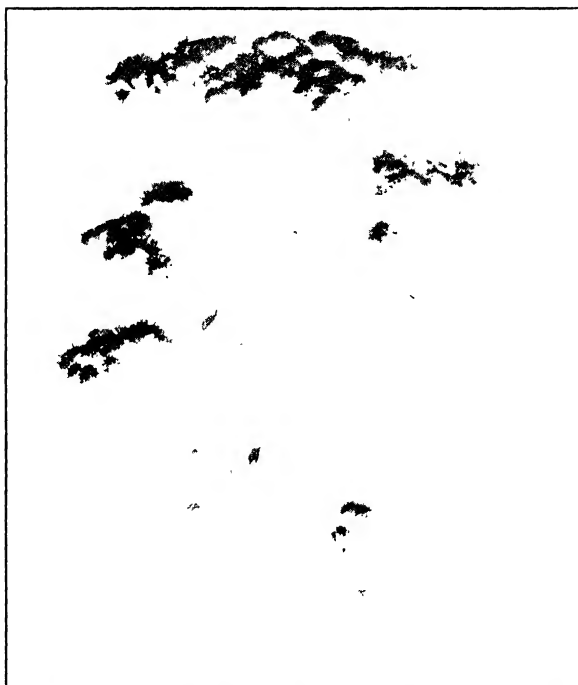
**PROPAGATION.** They are raised from seeds, but some have found that certain of the sorts are rather capricious although the plants frequently self-sow their seeds and spread rapidly. Sow the seed as soon as ripe, in which case they germinate the next Spring. The plants are divided with difficulty.

## **Eupatorium—(White Snakeroot), Thoroughwort, (Hemp-agrimony), Mistflower, Joe-pye-weed**

How often we are tempted to praise the beauties of some foreign flower while our excellent native ones pass by with little attention. There are many sorts of Eupatoriums and most of them can be found growing wild in our own country.

The hardy Ageratum or Mistflower (*Eupatorium* or *Conoclinium coelestinum*) has myriads of small fluffy, azure-blue flowers which are in bloom during August and September. The plant reaches a height of 2 feet. It is often confused with the annual Ageratum which does not produce clumps as does this and generally has green rather than purple stems.

The Snow Thoroughwort or White Snakeroot (*E. urticaefolium* or *ageratoides*) has pure white flowers and grows from 4 feet to 5 feet tall,



The shady slopes are covered with *Eupatorium ageratoides*.  
Haven't you a shady place for them?

whereas the Boneset (*E. perfoliatum*), which also has white flowers, only grows 2 feet or 3 feet tall. The leaves of this sort are in pairs, united at the base about the stem, known botanically as perfoliate leaves.

The Joe-pye-weed (*E. purpureum*) is very tall, growing from 4 feet to 10 feet and has large, purple, showy heads of flowers. The leaves are in whorls. Most of them bloom in late Summer or early Autumn with an average height of 3 feet to 5 feet.

**USES.** The Joe-pye-weed is found in wet meadows or along streams and would naturalize easily along woodland streams, or moist places in parks. The Mistflower and the Snow Thoroughwort are excellent for cutting purposes. All *Eupatoriums* are good in borders with the taller ones in the background, or to naturalize in woodlands. Some of them are excellent to use with shrubs.

**CULTURE.** They are of easiest culture, growing in almost any soil, although a rather light, well drained soil and a sunny position will produce large plants with numerous blooms. The Joe-pye-weed, however, requires a moist situation.

These plants increase in profusion of flowers and size of trusses when transplanted from the wild.

**PROPAGATION.** They are propagated from seeds or by division of the clumps.

## Ferns (See page 39)

## Funkia (See Hosta, page 131)

## Gaillardia—(Blanketflower)

The satisfactory Blanketflowers deserve a place in all gardens. They are showy, bloom under adverse conditions and are easy of culture. The great improvement in colors which has gone on in recent years is marvelous. There are both annual and perennial species, both of which have become so varied in their form and colors that the best test of a perennial sort is to wait until Spring. If it lives through the Winter and blooms the next year, it is perennial. The perennial sorts are cataloged as *Gaillardia aristata* (*grandiflora*). The flowers are often clear rich yellow or clear wine red, but usually the petals are broadly margined with yellow and the remainder of the flower is some shade of crimson. The centers of the flowers are frequently a deep maroon. *Gaillardia Portola* is a superior variety.

**USES.** *Gaillardias* are especially good for the perennial border where they start to flower in June and continue after many other flowers are killed by the frost. They are also prized as cut flowers and for this purpose should be cut when the flowers are slightly cup-shaped before the petals have reflexed. Without apparent harm the flowers may be kept out of water in carrying them from one place to another.

**CULTURE.** All persons who have grown *Gaillardias* know that they bloom even during protracted droughts. They prefer the full sun and a sandy soil. Old plants have a tendency to become "blind," that is, they grow nicely but produce no flowers. Such clumps should be dug and divided.

**PROPAGATION.** When raised from seed they do not bloom the first year unless started very early. They are easily raised, however, the seed germinating in five to eight days.

## Gentiana—Gentian

### TO THE FRINGED GENTIAN

Thou blossom bright with Autumn dew,  
And colored with the Heaven's own blue,  
That openest, when quiet light  
Succeeds the keen and frosty night.

Thou waitest late, and com'st alone,  
When woods are bare and birds are flown,  
And frosts and shortening days portend  
The aged year is near his end.

'Then doth thy sweet and quiet eye  
Look through its fringes to the sky,  
Blue—blue—as if the sky let fall  
A flower from its cerulean wall.

—WM. CULLEN BRYANT.

There are almost as many Gentians in poems and books about flowers as there are real Gentians in the woods. Two sorts are to be found by much hunting through United States. They are the Closed Gentian (*Gentiana andrewsi*) and the Fringed Gentian (*G. crinita*). The Closed Gentian is of interest because it blooms from September to November, but the flowers never open, remaining in large, bud-like form. The flower stems are  $1\frac{1}{2}$  feet tall and the purplish blue flowers are borne in clusters in the axils of the upper leaves. The plants are found growing on damp hillsides and in meadows.

The Fringed Gentian is more beautiful and less common. It is the most modest flower of our woods



Closed or Bottle Gentian, one of our choice wild

and hides itself away in the open places. The flowers are bluish and have a delicate fringe at the margins of the petals. Unlike the Closed Gentian, they are borne singly upon the apex of the stems.

**CULTURE.** The Gentians are difficult to transplant and if seed is sown, it should be fresh, otherwise it will not grow. The Closed Gentiana may be grown in moist meadows but they should have no lime in the soil. The Fringed Gentian is a biennial which is extremely difficult to grow. The first year the plants make only a very tiny rosette of leaves which escapes attention. The next year the plants bloom and die. Coming so late in the year, the plants often find difficulty in producing seed for they are generally frozen. If fresh seed is obtained, sow in pots. All sorts prefer partial shade.

## Geranium—Cranesbill

The plants, usually called Geraniums, are really *Pelargoniums* and do not come within the scope of this book. The true Geraniums are hardy perennials growing 12 inches to 18 inches tall. They range in color from lilac to rosy-purple. The most commonly cultivated species, *Geranium sanguineum*, has purple-crimson flowers producing a profusion of flowers through the Summer. A white variety is frequently listed. Two wild sorts are worthy of places in the wild garden or moist rockery, namely: *G. robertianum*, the Herb Robert, which has tiny magenta flowers and deeply cleft leaves. The plants are encountered frequently in very moist, rocky woods. They are easily distinguished by their peculiar odor. This is a biennial sort but will self-sow itself year after year. *G. maculatum*, the Wild Geranium or Spotted Cranesbill, is by far the commoner sort. The flowers vary from light to dark magenta. Both of these species are very hairy.

**USES.** The smaller plants are excellent for pot culture or to use as edgings for borders. Many are grown in rockeries, in which situations Herb Robert and the Spotted Cranesbill are especially attractive. Sometimes the flowers are cut and used in small basket or vase decorations.

**CULTURE.** Geraniums do nicely in moist places. The wild sorts will not stand the hot sun. Any good garden soil will do. They thrive best transplanted in the Spring.

**PROPAGATION.** They are propagated by sowing the seed during the latter part of Summer, and are usually wintered in coldframes.

## Geum—Avens

Among our pernicious weeds is one whose seeds are provided with hooks which catch in our clothing when on a Summer walk through the woods. This is a *Geum*. It is a surprise, therefore, to find several excellent perennial flowers as its relatives. The common species, *Geum chiloense*, or *coccineum*, as it is less properly called, grows from 12 inches to 18 inches high with hairy leaves, somewhat resembling those of a Strawberry. The flowers are both double and single and are borne on branched stems in great profusion. The variety Mrs. Bradshaw, is a popular one to grow. It has very large flowers from 1½ inches to 3 inches across with large, wavy petals of a bright crimson color. Lady Stratheden is a deep gold-yellow variety. The Geums bloom freely from May through October. *G. montanum* var. *heldreichi* produces orange flowers through the Summer and grows 12 inches tall.

**USES.** The *Geum* is a most excellent flower to use for bouquets. It wilts readily and when the flowers are cut they should be put in warm water. They are also good for borders and rockeries.

**CULTURE.** Geums will grow in full sunlight or partial shade in any garden soil and thrive very well among rocks, but are quite sensitive to cold and wet feet in Winter.

**PROPAGATION.** They are produced from seeds and cuttings.

## Grasses, Ornamental

This unique group of plants is not nearly so well known nor are the many excellent sorts as often seen as their merits deserve. Bamboos and Grasses are splendid for tropical effects and particularly to be admired for large beds, for the edging of ponds and streams or for combination in the perennial border. Plant all sorts in a rich, moist loam in a place protected from strong winds.

**PROPAGATION.** The varieties of grasses with variegated leaves are usually propagated by division rather than seed because, in most cases the variegations are not propagated true. Propagation by division is easily done in early Spring. Merely cut the clumps into pieces 3 inches or 4 inches across. Such divisions when planted a foot apart will, at the end of the season, increase the apparent size of the clump.

Many of the grasses, however, are propagated from seed sown in the early Spring. Ornamental grass in its young stages of growth appears to be so small that one has a feeling that it need not be given a great deal of space. Crowded grasses do not thrive, so that they should be transplanted when small and given plenty of space to develop.

### **Arrhenatherum—Oatgrass**

*Arrhenatherum bulbosum variegatum* is a dwarf, decorative grass of tufted habit, growing only 8 inches high. The green and white leaves do not retain their clear color throughout the season, but the plants die to the soil in Summer sprouting up again after a little rest. It is used where a white edging or border is desired. A curious feature of the plants is the bead-like strings of yellow cormels beneath the surface of the soil.

### **Arundo donax—Giant Reed**

This is the tallest of the ornamental grasses, sometimes growing in rich, deep soil to a height of 20 feet. The long, drooping leaves of



Giant Reed or Arundo, one of the tallest grasses

a bright green color are produced from the base to the top of the stem, somewhat resembling a corn plant, though more graceful. Late in Summer the plant produces showy reddish brown plumes over a foot long, which turn a silvery gray at maturity. The Giant Reed is useful for the centers of large beds, in the backgrounds of borders or as specimens in the lawn. It refuses to be at home in stiff, clayey soil, preferring a deep, sandy loam and a sheltered position. Variegated forms are obtainable; they have leaves striped with

white. This latter sort seldom grows over 6 feet tall and is not entirely hardy without protection in the colder climates.

## Bamboos

The Bamboos form a group of interesting grasses, interesting because of their association with many uses to which they are put by the Japanese. Few of our outdoor Bamboos, however, grow so that we can actually use them for fishpoles. They are usually more bushy. Three principal genera of grasses are known as Bamboos, namely: *Bambusa*, *Arundinaria* and *Phyllostachys*. Generally speaking, it is wise to protect all of the sorts listed as Bamboos.

The choicest and hardiest sorts include the following:

*Arundinaria auricoma*. This grass is an excellent purple-stemmed variety, having green and yellow variegated foliage. It is rather dwarf, growing only 3 feet tall.

*Arundinaria fortunei*. This is the smallest of the common hardy Bamboos, growing only 18 inches tall and having evergreen foliage, variegated green and white. Although it lacks the grace of the taller varieties, it is often used for edging or in rockeries.

*Arundinaria japonica* (*B. melake*). Arrow Bamboo. This handsome variety from Japan forms dense masses 8 feet to 10 feet high. The leaves remain on the plant in good condition well into Midwinter. This sort is reliable and thrives under trying conditions.

*Arundinaria simoni*. This sort is distinct and of vigorous growth, the branches being grouped in dense clusters. The narrow, green leaves are occasionally striped with white. It grows 20 feet tall in China although 15 feet is considered to be a good growth in this country.

*Bambusa palmata*. This is an effective, broad-leaved species forming dense clumps 4 feet high. The bright green leaves are often 15 inches long and 3 inches wide.

*Phyllostachys aurea*. Golden Bamboo. This graceful Chinese sort has close jointed canes which are light green when young, but change to a straw yellow when mature. The plants grow 15 feet tall and are covered with small branches which bear soft green foliage.

## Cortaderia (Gynerium)—Pampasgrass

"What is there growing in the garden or wild more nobly distinct and beautiful than the great silvery plumes of this plant waving in the autumnal gusts—the burial plumes as it were, of our Summer too early dead," writes Robinson in "Subtropical Gardening." Unfortunately, the plants of *Cortaderia argentea* are rather tender and require mulching in Winter, or they may be taken up and wintered in a cool cellar. The plumes are the handsomest, most graceful of all grasses and the needed care is worth the trouble.



## **Erianthus—Ravenna (Plume) (Hardy Pampas) Grass**

In habit *Erianthus ravennae* resembles the Pampas Grass, but it is not as ornamental because the plumes are not as showy. It grows 5 feet to 10 feet tall. In a sunny location, in well-drained soil, this grass is attractive as a specimen or for use among shrubs.

## **Festuca—Blue Fescue**

This little tufted grass, *Festuca glauca*, has silvery-blue foliage and grows only 10 inches tall. The plants are evergreen, but it is advisable to cut the old leaves from the plants early in the Spring before the new crop is produced. It is especially recommended as one of the best plants for edging in the perennial border because it keeps its place without encroaching upon the turf edge.

## **Miscanthus (Eulalia)—(Japanese Rush)**

The plain green and variegated sorts of Eulalia are of great value in the garden. They grow 5 feet to 7 feet tall. *Miscanthus sinensis* (*Eulalia japonica*) has deep green leaves 2 feet to 3 feet long and over an inch wide. *M. sinensis gracillima* has long, drooping leaves, narrower than the former sort and with a stripe of white through the center. *M. s. zebrina*, the Zebra grass, has leaves which are variegated, being marked crosswise with broad, yellowish white bands. In *M. s. variegata* the variegations run lengthwise in the leaves.

## **Pennisetum—Fountain Grass**

Most of the Fountain Grasses are annuals, but *Pennisetum japonicum* is a perennial, grows 3 feet to 4 feet tall, and has fox tail-like plumes of rich mahogany tipped with white.

## **Phalaris—Ribbon Grass (Gardener's Garter)**

This grass is a favorite of old gardens where it spreads widely. The leaves of *Phalaris arundinacea picta* are attractively striped with pure white. It is useful as a border for the taller perennial grasses because it grows 2 feet tall. It thrives especially well in wet soil and may be used on the margins of ponds. In soil too rich it loses its variegation.

## **Gypsophila—Babysbreath (Chalkplant) (Gauze-flower) (Fairyleath)**

The *Gypsophila* is one of the daintiest of the old-fashioned flowers, with a misty grace which is not found in other flowers. The flowers themselves are tiny, white or bluish-white and the plants are covered with myriads of these blossoms all during the Summer. The plant grows from 2 feet to 3 feet tall; the foliage is grasslike, the stems are branched minutely and are wiry, and the general appearance is filmy, gauzy or misty white. *Gypsophila paniculata* has single flowers, while *G. p. florepleno* has larger, double, rosettelike flowers and is more satisfactory. Bristol Fairy and Ehrlei are two much improved sorts with larger and purer white flowers. *G. acutifolia* is frequently cultivated, differing from *G. paniculata* in its greener and narrower leaves. *G. cerastioides*, the Mouse-ear G., and *G. repens monstrosa*, the Creeping, are trailing species blooming in June and July; the former has pinkish tinged flowers.

**USES.** The Babysbreath is an excellent cut flower, especially when combined in bouquets or decorations with other flowers which do not have much foliage. The flowers, especially of the double form, can be cut and dried and used during the Winter months. The plants themselves are useful in the hardy border, or as pot plants. The trailing form is useful for edging and for rock gardens.

**CULTURE.** *Gypsophilas* endure open, dry places and rather poor soil. The name *Gypsophila* (Gypsum-loving) seems to indicate its preference for limestone soils. Some gardeners claim that cutting the plants back after blooming is detrimental to them.

**PROPAGATION.** They may be propagated from seeds or cuttings taken either in the Fall or Spring. The double sorts should be grafted on the roots of the single flowering ones, as about 30 per cent of the seedlings come double from seed. Cut a slice from side of crown and use a veneer graft, tying the cion with raffia. The plants are divided most frequently.

## **Heather—Heath**

The American finds it almost unholy to write of Heather because his remarks may be read by a Scotchman who might wonder by what right an American obtained permission to discuss these bonny plants. There are a number of sorts of Heathers which may be grown in northern United States, but many of the European sorts are not hardy

enough. Lovers of Heather might easily grow it, if they but knew the sorts to grow. The following sorts are seen thriving in our country:

*Calluna vulgaris*, the true Scotch Heather, has tiny purple flowers and grows 12 inches to 18 inches tall. It blooms late in August and remains in bloom until Fall. There is also a white variety. *C. crista* is an excellent sort with pinkish lavender flowers.

*Erica carnea*, the Spring Heath, has pink flowers and is one of the most popular sorts in America. The plants grow 6 inches tall and bloom in April or May.

*Erica stricta*, the Corsican Heath, seldom attains a height of 2 feet and has stiff, upright branches. The flowers are rosy-purple, appearing in August.

*Menziesia polifolia*, the Irish Heath, has small, oval, dark green leaves and long spikes of large, drooping, white or bright rose bells. It blooms from July to September. The plants attain a height of 6 inches.

*Bruckenthalia spiculifolia*, the Spikeheath, is found listed in some catalogs. It grows 5 inches to 8 inches tall, has heathlike, light pink flowers produced in early June.

USES. Besides their sentiment and interest, the Heaths are extremely dainty for use in the border or rock garden. They are especially at home as an undergrowth for Rhododendron beds. They may be cut, and when placed in vases, will last for weeks.

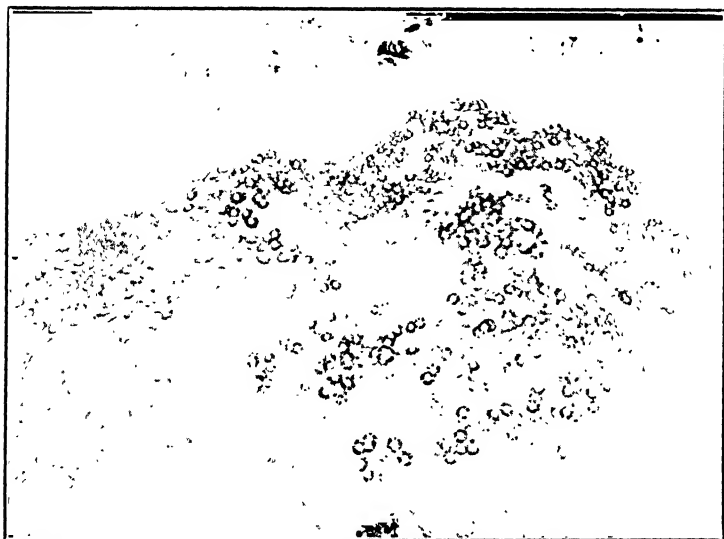
CULTURE. The various Heaths prefer a soil compounded of peat or leafmold. This means that all these plants prefer an acid soil. They like plenty of moisture in Summer but the soil must be perfectly drained. The weather conditions over much of the United States are not ideal, due to our hot, dry Summers, but Mr. Wm. Anderson (Lancaster, Mass.), writing in *The Gardener's Chronicle of America*, says:

"A situation should be selected where protection is afforded from sweeping winds in February and March. We have some Heather planted on a hillside in the full sun, and exposed to sweeping northwest winds. The tops were killed back some last Winter, but started up again in early Spring and was in full bloom September 6. These plants have been growing in their present location for four years. For the first two years the ground was kept cultivated between the plants, but the growth became so thick that this was discontinued, and since then, thousands of seedlings are beginning to appear under and between the older plants. In another spot a planting was put in two years later, and in a more sheltered location, and has come through the last two severe Winters in good condition."

PROPAGATION. The propagation of the Heathers is rather difficult for the amateur. It is best to purchase plants from the dealer.

## **Helenium—Sneezeweed (Helensflower)**

The Heleniums are tall growing, mostly autumnal plants which are closely related to the Sunflower. The blooming period is from June to the end of September and during this time the plants are covered



**Helensflower or Helenium. The rich maroon varieties are superb for late Summer or Fall garden effects**

with flowers of mahogany-crimson, coppery-bronze, lemon-yellow, and light and deep rich yellows. The flowers are flat and are borne in large heads or clusters. They grow from 1 foot to 6 feet high.

*Helenium autumnale*, Riverton Gem, grows from 2½ feet to 3 feet high and has flowers of an old gold color, which changes to a blood-red Wallflower color when mature. Riverton Beauty grows from 5 feet to 6 feet tall. Its flowers are a rich lemon-yellow with a purplish-black cone center. Rubrum bears large, loose heads of terra cotta or mahogany-crimson flowers which do not change as the blooms mature. Superbum has deep, golden yellow flowers while Striatum has yellow flowers striped with crimson. All the above varieties bloom from August through September.

*H. hoopesi*, a clear, rich yellow sort with slightly drooping rays, blooms early in June and grows only 2 feet tall.

Following the last named species in season of bloom is *H. pumilum*, another yellow sort, usually growing about 18 inches tall and bearing a profusion of flowers through the Summer months.

**USES.** Heleniums are a very useful as well as popular group of plants for the garden, for their masses of golden-hued colors blend with the autumnal colors and produce effects which are hard to achieve in any other group. Because of their tall growth, Heleniums are used to form the body and main background of large borders and are very attractive when planted among shrubbery. The flowers are very useful for cutting and the blooms remain fresh for a long time when placed in water. The bushes are always covered with large quantities of bloom which remain on the plant in good condition for some time. The cut flowers are useful for interior decoration.

**CULTURE.** Heleniums are vigorous growing plants which thrive in any soil, but for some reason they often die out.

**PROPAGATION.** These plants are propagated by seeds sown in July, by division of the roots either in early Spring or Fall, and by cuttings taken in Spring.

## Helianthemum—Sunrose

A rather neglected stepchild is the *Helianthemum* which in the strict sense of the word, is not a herbaceous perennial but a shrub. Being thus between what are readily recognized as shrubs and herbaceous perennials, it has not received the attention it deserves. An attractive creeping plant with bright little flowers, many species are found in European catalogs and some four or five in our own. *Helianthemum chamaecistus* (*vulgare*) is the commoner sort which has yielded a number of varieties, ranging from chocolate, bright red, clear yellow to white and pink. The flowers open in the morning and close about noon, are about an inch across and have a huge mass of yellow stamens at the centers.

**USES.** They are admirably adapted to rock gardens and are well planted upon steep banks. For the front line of a perennial border they make a mat of foliage and furnish a goodly quantity of bloom, although it cannot be said that they are as profuse flowering as usually seen in the eastern or central states. Mons. Henri Correvon, after his visit to the United States, was enthusiastic in advising Sunroses for use upon our usually bare terraces.

**CULTURE.** They tolerate hot sun; in fact, they thrive better in such conditions than when their roots are kept too wet. Limestone soil suits them. A protection using straw or evergreen branches is wise for Winter.

**PROPAGATION.** They may be most easily rooted from cuttings taken in Spring or Summer. Division is possible.

## Helianthus—Perennial Sunflower

This bold perennial is so diverse in its habits that it is hoped the reader will not come to it with prejudice because some of its relatives are coarse and grasping in nature. Some of the sorts are actually dainty. All the sorts are tones of golden yellow and they are usually tall growers. Of the many sorts we shall mention a few of the best.

*Helianthus maximiliani* is perhaps the tallest one, growing 8 feet and sometimes more if the conditions are favorable. It is the last one to bloom, flowering as it does in October. Its long stalks are full of small golden yellow flowers.

*H. orgyalis* is sometimes called the Graceful Sunflower because of its narrow foliage which droops. It has single, lemon-yellow flowers and is another very tall grower.

*H. mollis*, or the Ashy Sunflower, grows 4 feet tall and has grayish,

downy, green leaves, dark stems and pale yellow flowers with dark centers. *H. scaberrimus* (Prairie Sunflower) blooms in September and has deep yellow flowers with maroon centers. *H. decapetalus* or



Maximilian Sunflower, one of the choicest late flowers of Fall

*H. multiflorus* is one of the most profuse bloomers and, when planted where it may be given room to spread, is one of the good species. It has long, strong stems, commending it as a cut flower. The Autumn-glory (*H. angustifolius*) is one of the most graceful small-flowered sorts, that it makes a splendid addition to the small number of plants which bloom after frost. It is frequently cataloged as *H. questifolius*.

**USES.** These are splendid to plant in the back rows of the border, in clumps on the lawn among shrubbery, or to naturalize in the wild flower gardens or along woodland paths. They combine attractively with hardy Asters. The flowers are cut and used for all kinds of decorative purposes.

**CULTURE.** Because they grow so tall, they should be planted in places where the soil is not only rich, for they are great feeders, but also very deep. The soil should be manured well every season, because the roots exhaust the soil of food materials very readily. They prefer open, sunny places to partially shady ones, although they like a moist soil. The plants require almost yearly transplantings.

**PROPAGATION.** *Helianthus* is readily propagated from cuttings or division of the root stocks.

## Heliopsis—(Orange-sunflower)

The *Heliopsis* is not grown to a great extent because so many more attractive flowers are to be found among the varieties of *Helianthus*. This Orange-sunflower is very similar, growing from 2 feet to 3 feet high, with flowers varying in colors from orange to a deep golden yellow. The flowers are either single, like a Daisy, or double, like a Zinnia, and measure 2½ inches or 3 inches across. *Heliopsis pitcheriana* which grows 2 feet to 3 feet is a good variety to grow. It has single flowers of a very thick texture and of a deep golden yellow color. It begins blooming in June and lasts through September and early October. *Excelsa* is an intense golden sort which does not turn brown in the center.

**USES.** The Orange-sunflowers have long, stiff stems which make them valuable for cutting. The blooms last a long time, both on the plant or in water. The plants themselves are suited for borders or dry spots.

**CULTURE.** They are of easy culture, preferring open, sunny situations.

**PROPAGATION.** They are propagated by seeds, cuttings and division of the root stocks.

## Hemerocallis—Daylily

During the early Summer months the roadsides, railroad tracks and banks of streams are brightened immensely when the Tawny Daylilies come into bloom. They grow so freely and in so many out of the way places that many people have come to consider them as native plants, but they are wild in Japan and China. This Daylily (*Hemerocallis fulva*) has a gaudy orange-yellow color. The plants grow from 3 feet to 5 feet high, have narrow, drooping, grass-like leaves which are very graceful, and the trumpet-shaped flowers are produced on spikes of from six to twelve blooms. Each flower lasts only a very short



**Lemon Daylily, with charming fragrance and grace**



time, but new ones bloom every day. The blooming period extends from early June through July for all the varieties. *H. aurantiaca*, the Orange D., is more beautiful in form than *H. fulva*, because of the clearer color. The Lemon Daylily (*H. flava*) has clear lemon or canary-yellow-colored flowers and is the better one of the two to grow in the gardens. It is only 2 feet or 3 feet high and is delightfully fragrant. The Japanese D. (*H. thunbergi*) may be described as a later blooming Lemon D.; it is an acquisition. *H. middendorffi* is a dwarf sort with rich, golden yellow flowers. *H. dumortieri* begins blooming in May and has very showy flowers of a bronze yellow on the outside and a rich yellow inside of the petals. There are many new hybrids of the Daylilies, many of which are superior in color and produce more blooms to the spike. *H. florhami* has deep, golden yellow blooms with Indian-yellow markings. The petals are beautifully frilled. *H. citrina* has pale lemon-yellow flowers and is a tall grower. *H. fulva kwanso* is a double form of the Tawny Daylily.

USES. Since they grow and bloom so freely, their uses are many. About the most attractive way of growing them is to let them naturalize themselves along woodland paths, along streams or moist banks. They are excellent for the border or to plant among shrubbery. The flowers are used for cutting purposes.

CULTURE. The Daylilies are easy to grow, thriving equally well in full sunlight as in partial shade. In fact they can be planted anywhere and they will take care of themselves. It is best to divide the clumps every two years, although they are often left for four or five years. They do not need any protection during the Winter.

PROPAGATION. They are easily propagated by division of the root stock.

## Herbs

The home gardener can derive a genuine pleasure in growing herbs when they supply so many of one's wants. This is especially true of a housewife who has her own kitchen garden.

### CULINARY HERBS

Borage (*Borago officinalis*). The large leaves have a fragrant odor and add greatly when served with Lettuce in salads. The leaves are sometimes boiled like Spinach. The flowers are used in cool drinks and they also attract the bees.

Burnet (*Sanguisorba canadensis*). The leaves are used in cool drinks and in flavoring soups and salads.

Dill (*Anethum graveolens*). The seeds have a pungent odor. Used for flavoring vinegar to make "dill pickles."

Fennel, Florence (*Foeniculum dulce*). The leaf-stalks at the base of the stem are very large. These are fine in salads, the sweet flavor somewhat resembling that of Celery.

Fennel, Sweet (*Foeniculum vulgare*). The leaves are beautiful for garnishes; are also boiled in fish sauces.

Lavender (*Lavandula vera*). The leaves and flowers have a delightful perfume and a small bag of the dried flowers gives the linen a delicate perfume. Oils are also made from the true lavender.

Marjoram, Sweet (*Origanum majorana*). The leaves and shoots are used for seasoning and are also dried for Winter use.

Mint (*Mentha piperita*). The leaves and stems are used for flavoring and for the distillation of essence of peppermint.

Sage, Common (*Salvia officinalis*). The leaves and tops are used commonly in the seasoning of the stuffing for fowls and for dressings.

Tarragon, True (*Artemisia dracunculus*). The leaves, either fresh or dried, are used for flavoring soups, pickles and vinegar. The finely chopped fresh leaves add greatly to salads.

Thyme (*Thymus vulgaris*). The leaves are used either fresh or dried for flavorings. This is also a good edging plant for the garden.

#### MEDICINAL HERBS

Boneset (*Eupatorium perfoliatum*). Tea made from the Boneset leaves is used for fever.

Catnip (*Nepeta cataria*). It is a well established fact that cats delight in rolling among the leaves. The Catnip is said to be a good bee pasture.

Feverfew (*Chrysanthemum parthenium*). This makes a good blood tonic.

Horehound (*Marrubium vulgare*). The leaves are used as a remedy for colds, for dyspepsia, and also for their tonic effect.

Hyssop (*Hyssopus officinalis*). The leaves and tops are used for Hyssop tea. This plant is also grown as a pot plant.

Rosemary (*Rosmarinus officinalis*). Rosemary tea gives relief to headaches.

Tansy (*Tanacetum vulgare*). Tansy tea is used against worms and is generally used in bitters.

Wormwood (*Artemisia absinthium*). This is beneficial to poultry and should therefore be planted in every poultry yard.

**CULTURE.** All the herbs require a rather rich garden soil. If they are being grown for their seeds, the branches should be cut when the seed is ripe before it has a chance to fall away and scatter. After being dried properly the seed should be stored. The stems and leaves, if they are to be dried, should be cut on a bright day when the leaves have matured; then tied in small bundles, dried quickly in the shade, and hung in paper bags in the attic until they are needed. They can also be kept in mason jars or tight fitting boxes. The roots should be washed thoroughly before drying. All the herbs except Lavender, Rosemary, Thyme, Sage and Wormwood, which are of a shrubby nature, should be cut back to a few inches from the ground and covered with straw or leaves during the Winter. These few plants should be cut to within 6 inches of the ground. All herbs need Winter protection.

**PROPAGATION.** Most herbs are easily raised from seed. Tarragon is propagated by division of the roots. The seed should be sown where the plants are to remain, and then the small plants can be thinned out later. It is best to plant them on a dull day and water them carefully.

### **Hesperis—Dames Rocket (Damask-violet)— (Sweet Rocket)**

Sweet Rocket is one of our most fragrant flowers which grows almost wild, as it has escaped from the gardens. *Hesperis matronalis* has white, flesh or magenta-colored flowers which grow in large clusters. The plants are about 3 feet high and are bushy. All of the flowers are very sweet-scented and this is noticed especially in the evening. They bloom from June through September.

**USES.** They are used in the border where they bloom earlier than Phlox, which they somewhat resemble. The flowers are used for cutting. The magenta colored sorts are trying to combine with other flowers, so that the white variety is the one to grow.

**CULTURE.** They thrive in either sun or partial shade in any good garden soil. Closely related to the Cabbage, they are sometimes affected with the Cabbage worm, in which case, they should be sprayed with arsenate of lead.

**PROPAGATION.** They are grown from seeds and readily self-sow. They should be treated as biennials.

## **Heuchera—Coralbells (Fairyflowers) Alumroot (American Sanicle)**

Heucheras are among the most desirable of the smaller growing plants. There are many varieties worth growing. Of these, *Heuchera sanguinea* is most often seen. The plants are compact, bushy and grow in tufts, the flower stems growing 1½ feet or 2 feet high. The ever-green leaves look like those of a Geranium. From a mass of ornamental foliage rise graceful spikes covered with pendent flowers which assume the size of Lily-of-the-valley bells, of a bright coral-crimson color. It blooms about the middle of the Summer. Catalogs list white, creamy, purple, and rose-colored varieties. The Alumroot, *H. americana*, resembling in foliage the Foamflowers and the Mitreworts, is a native of our woods; it has red-green leaves in Winter.

USES. Small clumps of Heucheras are very attractive when planted by themselves among the shrubbery where their dainty bells will not be outshone by other gay flowers. The foliage is tinted with various maroon markings during the Winter and this makes the plants valuable for the borders. The leaves are also used in vases as accompaniments to other flowers, and the sprays of bloom make excellent cut flowers. Heucheras are perhaps most at home when planted in the rockery where they become robust and the foliage completely covers the rocks.

CULTURE. Moist, rich loam is the best soil in which to grow them. Although the plants grow for a long time in one place, the larger plants tend to grow weak very soon. These should be removed and planted elsewhere about every four years. Spring is the best time to transplant. They refuse to thrive in a stiff, clayey soil. They need protection which if given, assures that they will live through the Winter.

PROPAGATION. The plants are propagated by division in July or Spring, or seeds, which should be sown in March if a greenhouse is available. The seedlings are tiny and need not be transplanted until they attain some size. The seed does not germinate well.

## **Hibiscus—Rosemallow (Marshmallow) (Mallow Marvels)**

The perennial Mallows bear some of the largest flowers of any of our perennials and present a gorgeous sight when in bloom. They grow from 3 feet to 8 feet tall and the branches spread out over a great



*Left, the giant flowers of the Rosemallows or Hibiscus, the largest flowers of the garden; right, Japanese Irises, the gorgeous flowers of which rival the other flowers of June*

area. The leaves are large and grayish-green in color. The flowers resemble a single Hollyhock bloom, only they are much larger, some measuring from 6 inches to 10 inches or 12 inches across. The colors range from white with crimson centers to deep crimson, but most of the colors are soft, causing them to blend with other flowering plants. The plants being blooming in July, but are at their best during August and September. Altogether these large Mallows present quite a tropical aspect to any planting. The Common Rosemallow (*Hibiscus moscheutos*) grows 4 feet or 5 feet high, and has flowers 6 inches across of a clear rose color with a large dark eye in the center. This is a very showy plant. The Crimson-eye Rosemallow (*H. oculiroseus*) has large, pure white flowers with a deep crimson eye. The flowers are extremely large and appear velvety. The Mallow Marvels comprise a group of especially large-flowering sorts.

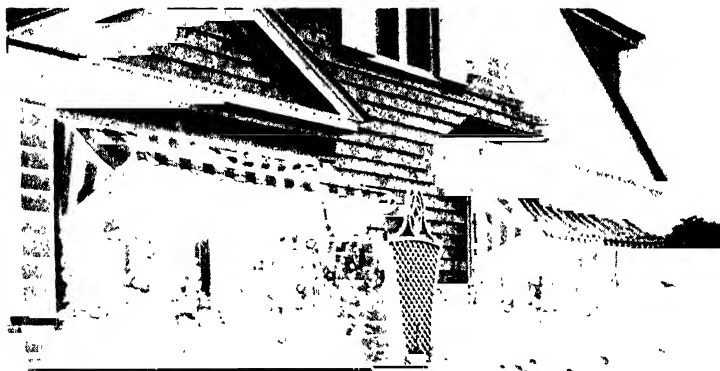
**USES.** Mallows are hardy and adapt themselves readily to almost any planting. When grouped in masses the large plants present an extraordinary picture. They may be planted either among shrubs or used as a substitute for them. The plants are too large for the ordinary garden border because they require much room, but they can be used in large beds of mixed flowers.

**CULTURE.** Mallows prefer a moist soil although they will do equally well in dry soil, sun or partial shade. The plants die down to the ground during Winter and are about the last plants to show green shoots in the Spring. They grow very rapidly and do not require much care. A light mulching of the plants is good for Winter.

**PROPAGATION.** They are propagated from seed which will produce blooms the first year if the seeds are sown early enough. The roots are easily divided and one can always be sure that the plants will come true to form if this method is used.

## Hollyhock—Althaea

A constant, old-fashioned garden favorite! Hollyhocks have been universally admired for hundreds of years. They are stately, majestic, towering plants that add beauty wherever they are grown. What other plant has so stately a habit or so many clear, lovely colors? In single plants or in masses against walls or buildings, in groups at the back or rear of the perennial border, interspersed with low shrubbery or in bold masses along drives or walks, they are alike effective. Many



Tall Hollyhocks to greet us through the open window

fine plants will give their fullest effects the first year, so they are planted to advantage in the newly made garden when the trees and shrubs are low and the general effect is too bare of color and foliage. There are singles and doubles. The doubles are popular, but the singles are always admired because of their simple beauty and individuality. A group of well grown Hollyhocks in bloom is worth going to see. It is really the color that we look for, because the leaves are large, coarse and grow mostly in clumps at the base of the plant. The long spikes of flowers grow from 5 feet to 8 feet high and there are usually from five to nine blossoms in bloom on each well grown stalk. The average size is about 2 inches or 3 inches across, but 5-inch blooms can be had if good attention is given. The colors range from white to almost black and include shades of pink, flesh, rose-pink, salmon-rose, golden yellow, canary-yellow, dark red, purple-crimson, dark maroon, white and combinations of practically all these colors with either white centers or white margins. The blooming period is from late June through September. Fringed petaled sorts are cataloged as Alleghany Holly-



*Left, Coralbells or Heuchera, slender spikes of bright bells for the border or rockery; right, Blue Flax or Linum, airy, dancing blue flowers*

hocks and are exquisite. There are also annual sorts which may be depended upon to bloom the same year they are sown.

**USES.** Hollyhocks at the present time have a great landscape value to hide unsightly places, to work in the border, or among the trees and shrubs. They are also used for cut flowers, but wilt very rapidly. It is suggested that the stems be dipped in nitric acid.

**CULTURE.** They require a deeply dug, well-drained soil made up of equal portions of good loam and leafmold. Well-decayed manure is good also to mix in the soil. They should be planted in a warm place and given plenty of water during dry weather.

**PROPAGATION.** As the seeds ripen in August they should be sown in light soil and the seedlings grown in coldframes during the Winter. The ground should be well prepared and the plants put in just as early as the ground can be worked. Hollyhocks self-sow very rapidly.

**DISEASES.** Hollyhocks, where grown for a number of years in the same place, are troubled with a rust. It causes little trouble, however, among vigorous young plants. A mixture of lime and sulphur blown under the leaves will prevent any serious outbreak. Bordeaux mixture is also effective. Badly infested plants should be dug and burned. Keep down the growth of the Mallow-like weeds. Much of the trouble with the rust is eliminated if the seed is sown as advised in August instead of Spring.

## **Hosta (Funkia)—Plantainlily (Corfulily)**

Two sorts of flowers have been called Daylilies—Funkia or Hosta, and Hemerocallis. Both are old favorites in the garden. The flowers of the latter group are orange and yellow (see Hemerocallis, page 123). Most of the Funkias are grown for their excellent foliage which is produced in clumps. The one most commonly grown in our gardens is the Big Plantainlily (*H. plantaginea grandiflora* or *subcordata*). Its leaves are a glossy light green in color with spikes of pure white Lilylike flowers. It grows about 2 feet high and spreads in a circle about 3 feet across. The flowers are very fragrant, appearing during August and September. The Blue Plantainlily (*H. caerulea*) grows 1½ feet high, blooms during July, and has mauve or blue drooping flowers. *H. sieboldiana* is one of the strongest growers in this group. It is 2½ feet tall, has white flowers tinged with lilac produced in July and has very large, grayish-green leaves. There are some of these Plantainlilies with variegated foliage, bright green margined in white, of which *H. undulata variegata* is one of the best. They improve every year as the clumps increase in size.



**USES.** Plantainlilies are perhaps most useful in the various kinds of borders. The dwarfer variegated kinds are used for edging purposes. They can be used as specimen plants in the lawn, planted near lakes or streams, or grouped around shrubbery. Both the foliage and flowers are distinct, beautiful and attractive wherever planted. Some of them are used in rock gardens. They are excellent plants for the strip of soil near the house in the shade which is common about most of our homes.

**CULTURE.** Before planting the ground should be prepared to a good depth and enriched with manure. They grow best in moderately rich soil where a good supply of moisture is available. They will grow either in sunlight or shade, but they grow best in partial shade, even in the northern exposures, where very few other plants will grow.

**PROPAGATION.** The division of the root clumps is the easiest method of propagating them. Some produce seeds which grow readily if planted soon after the seeds ripen.



St. Johnswort, the large yellow flowers of which, filled with threads of gold, are sure to be enjoyed

### **Hypericum— St. Johnswort Goldflower (Aaronsbeard)**

Literally speaking, these flowers either seem to be made of gold or to be holding the golden rays of sunlight within their small-petaled cups. Real, genuine pleasure is derived by growing this plant. The Goldflower (*Hypericum moserianum*) has large, deep, glistening, golden yellow blossoms, greatly resembling a single Rose, filled with numerous yellow stamens and red anthers. These flowers are borne very freely at the ends of

long, graceful, reddish branches which are covered with oval, shining, smooth, deep green leaves. This plant grows from 1½ feet to 2 feet tall and the slender, spreading branches droop at the ends. The flowers are in bloom from August through October.

Aaronsbeard (*H. calycinum*). Lower growing, with golden yellow flowers.

USES. The *Hypericums* are especially good to use as borders for shrubs or the perennial beds of flowers, or to use in rock gardens. The plants are neat growing for pot culture. The flowers are employed in decorations.

CULTURE. The plants do best in a light, warm, sandy soil. The flowers last longer if they are shaded slightly. All of the *Hypericums* are shrubby in nature, the woody growth and some of the leaves remaining on during the Winter months. New growth starts from the base of the plant.

PROPAGATION. They are propagated from seeds, cuttings or division of the roots.

## Iberis—Candytuft

Candytuft, a low growing evergreen shrub, is in reality one of the best flowers in its class. It grows from 9 inches to 12 inches high and spreads out making low mats which are covered with flat, dense clusters of the purest of white flowers. This Evergreen Candytuft (*Iberis sempervirens*) comes into bloom the end of April and lasts through June. *I. gibraltarrica* is the largest of the Candytufts, but is somewhat more straggly in growth. It is very showy because the clusters of white flowers are deeply tinted rose-lavender. This is the larger and showier of the two species, but is not as hardy. The foliage of Candytuft is evergreen, which makes the plant attractive throughout the year.

USES. Candytuft, besides being one of the best white flowers for cutting, is also invaluable to use in rock gardens, to cover bare spots and to use in beds. Candytuft, with its evergreen foliage, is one of the best plants grown for edging purposes. Some of the varieties are fragrant, which make them more useful as cut flowers. The plants are used in hanging baskets, porch boxes and are grown as pot plants.

CULTURE. The plants form a dense mat and when once established should not be removed. They do best in the sunshine. A moderately rich soil and plenty of water are the most important requirements. If the true *I. gibraltarrica* is grown, it will need well-drained, sunny rockery or careful protection in the northern states.

**PROPAGATION.** Those plants grown from seed are usually straggly the first year. They are easy to raise from seed, which germinates in two weeks, but the best plants are obtained from cuttings which root easily. Cuttings should be made in September and wintered over in a coldframe where they can be kept moist.

## Iris—(Flag)

It is a peculiarity of an Iris lover that he does not like to have an Iris called a Flag, although most persons call these flowers by that name. With the advent of new varieties the Iris is gaining in popularity from year to year. A national society honors this flower and many cities have Iris clubs. The exquisite colors and the unrivaled form have attracted many flower lovers. A collection of the varieties is a veritable rainbow of soft colors.

**BEARDED, or GERMAN IRIS.** The most cultivated group of Irises are the bearded sorts, all of which have thick, fleshy, underground stems rendering their increase most easily accomplished. They are remarkably well adapted to different situations. They do well in hot dry, sunny places as well as the cooler and damper spots. In the shade, they are not at their best. They require frequent transplanting, as the clumps soon become too thick.

**JAPANESE IRIS.** Gorgeously colored and giant in size the Japanese Iris (*I. kaempferi* or *laevigata*) will become more popular in the future, for now the Japanese names have been translated and the flower buyer may be sure of the sorts he buys from the nurseryman. Unlike most Bearded Irises, the Japanese Iris is a flat bloom, the leaves are narrower and the rhizomes are smaller and more compact. They delight in water when in bloom but not at other times during the year.

**SIBERIAN IRIS.** For the margins of pools, where the soil is a trifle too damp for other flowers, the Siberian Iris (*I. sibirica*) thrives. It will not succeed with its roots in water, however. The flowers are rich purple, light lavender, blue or white, and like the Japanese Iris, these flowers are without the prominent beard found in the Bearded Iris.

**WATER IRIS.** There are two common sorts of Iris which may be planted directly in the water; namely, the European Yellowflag (*I. pseudacorus*) and the Blueflag (*I. versicolor*). The European Wild Flag has large, yellow flowers, the petals of which are drooping. The flowers appear among the luxuriant leaves. The Blueflag is a familiar flower to most Americans, for what boy or girl has not gotten wet feet gathering it? Both of these sorts will thrive in ordinary garden soil without a great quantity of water.

**DWARF IRIS.** In April, during favorable early Springs, we are delighted with the various dwarf Irises. Growing about 6 inches tall they supplement the Spring bulbs. Especially charming are the purple dwarf sorts when planted in front of Emperor Narcissus. *I. chaemairis* is the dwarf bearded species: *I. verna* and *I. cristata* are beardless sorts. The latter sort is very tiny and has very slender creeping rhizomes. Being sensitive to too much moisture, it grows very well when planted upon little mounds of soil or in perfectly drained spots, such as in a rockery.

**INTERMEDIATE IRIS.** Hybridists have crossed the tall Bearded Iris with the dwarf Bearded sorts to produce a group intermediate in season and height between the two parents.

**USES.** The uses of Iris have been suggested in the foregoing paragraphs. It is an excellent border subject and for home use the flowers are attractively arranged in our rooms. There are wet soil sorts, tall varieties, very early kinds and all types of bloom to attract each and every one.

**CULTURE.** The simple, let-them-alone, culture of the Iris is gratifying to the home owner who is not a careful gardener. They do not like water upon their crowns in Winter, except where noted. The Bearded sorts are said to like lime; the Japanese Iris does not prefer a limestone soil.

**PROPAGATION.** Merely cut up the old clumps to propagate them. Each piece will grow, even if allowed to lie about the garden for a week without planting. The Bearded sorts increase rapidly and should be divided every three years.

## **Kniphofia—(Tritoma) Torchlily (Redhotpoker) (Clublily)**

Brilliant flame-like spikes of *Kniphofia* are showy in the garden and they never become too common, because in northern gardens they are a trifle tender to the cold. The most usual sort seen is *Kniphofia uvaria* (*aloides*) (*pfitzeri*), a species 3 feet tall and with brilliant orange-scarlet spikes of tubular flowers. *K. rufa* is lower growing and with yellow flowers. It is interesting, even though it does not assume the proportions of the commoner one.

**USES.** Splendid in front of shrubs but not to be combined with the delicate tinted perennials. With masses of foliage as a background, their beauty is properly displayed.

**CULTURE.** The principal point of culture is to remember their tenderness in northern climates. Dig them in late Fall and plant in a coldframe or protected place. They prefer quantities of water and a sandy soil.

**PROPAGATION.** Best by dividing plants in Spring. Seedlings of most sorts are slow to bloom. Some seedsmen list a strain that blooms first year from seed.

### **Lavandula—Lavender**

Sweet Lavender is one of the well-beloved, fragrant plants of the old-fashioned garden. It was a favorite because of its delicate odor. Lavender (*Lavandula officinalis* or *vera*) grows from 1½ feet to 3 feet high, has downy, silvery gray foliage and long spikes of blue-lavender flowers. It blooms from July through September and produces flowers very freely. There are two dwarf varieties: *L. nana compacta* with large blue flowers, and the Munstead Lavender with dark blue flowers, both of which grow 12 inches high and bloom several weeks earlier than the type. *L. spica*, the common Lavender, is dwarf and has light colored flowers.

**USES.** Many persons make small sachet bags of the dried leaves and flowers to put among linens. Because of the gray foliage, Lavender is used to great advantage in borders. It is also grown for low hedges, or on dry banks and in the rock garden. The flowers are good for cutting.

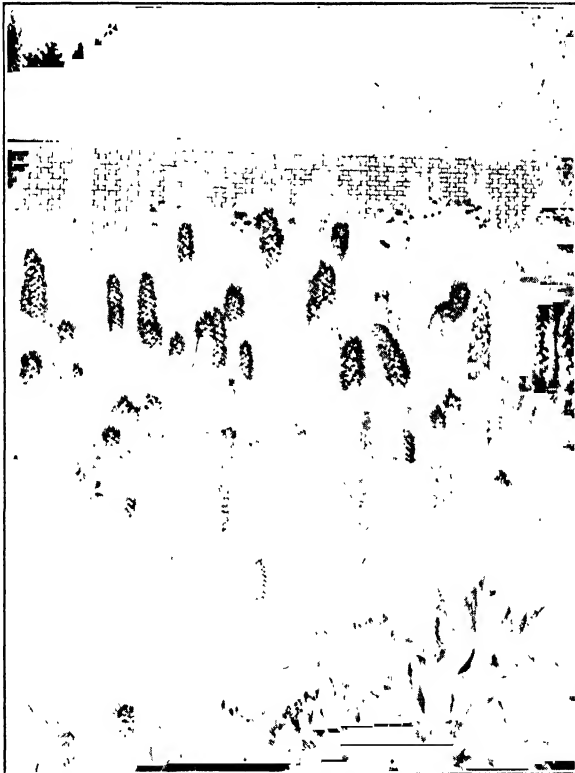
**CULTURE.** Lavender requires a sunny situation and light soils. Heavy protection during the Winter months is also needed.

**PROPAGATION.** Young plants are easily started from seeds sown early in the Spring. They should not be sown too deeply, and after the plants appear, they should be kept shaded and moist until real strong.

### **Liatris—Gayfeather (Blazing Star) (Button-snakeroot) (Devilsbit)**

Liatris is a rather odd plant and merits a much more general use because it is very desirable and attractive. The Cattail Gayfeather (*Liatris pycnostachya*) is the one most commonly grown and is one of the choicest sorts. It grows in long spikes, 4 feet to 5 feet tall, which are densely covered with slender, grasslike leaves of a light green. The small flowers are a light rosy-purple, a color which does not

harmonize readily with all other colors. A peculiar habit of the *Liatris* is that the succession of bloom is from the top downward, rather than from the lowest blooms up to the highest as in all other spike flowers. They bloom in August and September. The Button-snake-root (*L. spicata*) and *L. scariosa*, are two other fine species, both producing deep violet-purple spikes of flowers but not growing so tall as the first sort and with fewer but larger flowers. There are also lighter shades of purple and white varieties. There is hardly any perennial which will attract as much attention as does the *Liatris* because it is so brilliant in color and unusual.



Gayfeather or *Liatris*, an unusual flower of Summer

**USES.** *Liatris* is a splendid border plant to use at the back of the border, but the color is one which goes with few other flowers and it should be subdued with white flowers. The plants have great attraction for butterflies and bees.

**CULTURE.** *Liatris*es will thrive in places where scarcely anything else will grow. They will grow in any soil or shade, but prefer a moist soil and partial shade.

**PROPAGATION.** They are propagated from seed sown in the Autumn, or by division of the tuberous roots.

### **Linum—Perennial Flax, Golden Flax**

Flax is a lovely, airy plant with flowers of yellow, blue and white. The general height is from 12 inches to 18 inches. The foliage and flowers are very delicate and graceful and present the appearance of a small, feathery bush. Golden Flax (*Linum flavum*) has transparent, deep, golden yellow flowers. *Linum perenne* is the tallest one of the Flax plants and has rather small flowers of a pearly blue. *L. p. album* is the white-flowered variety. The flowers are borne in great numbers all during the blooming season which lasts from May through September. They have the capricious habit of blooming every other day.

**USES.** Flax, especially the yellow-flowered one, is very attractive to combine in plantings of Delphiniums, for both are in bloom at the same time. Flax is a dainty flower for any border because the plants bloom through such a long season. Some of the smaller plants are grown in pots and in the rock garden. The evergreen leaves and profusion of bloom offer further reasons for growing the Blue Flax. For the rockery, *L. flavum* is a good subject, preferring a well-drained location to be at its best.

**CULTURE.** Flax is very easy of culture, growing readily in any good garden soil in full sunlight. It dislikes root disturbance.

**PROPAGATION.** It is propagated by seeds and division of the plants.

### **Lobelia**

Natives of our woods, in marshy places we find two exquisite wild Lobelias, the Cardinalflower, *Lobelia cardinalis*, and the Great or Large Blue Lobelia, *L. siphilitica*, a blue sort. Both sorts vary greatly in height, some growing 3 feet or 4 feet tall, other plants being hardly a foot tall. Some of the European catalogs list sorts of the Cardinal-flower which have bronze colored leaves, but these sorts are seldom seen in America. They bloom from July to September.



*Left, Lupines, the tall spires of blue, purple, white or pink flowers making points of interest in the border; right, Blue Lobelia, one of the charming blue natives*

**USES.** They are at home in damp spots of the gardens, and along the waterside. The Great Lobelia prefers wetter places than the Cardinalflower. When grown in dry places, they suffer from drought; they often thrive in the ordinary garden soil, but are not as tall as in the wild places adapted to their culture. The Great Lobelia thrives in partial shade or sun but the Cardinalflower is usually found in partial shade.

**PROPAGATION.** They grow readily from seed which is usually sown in the Fall, in which case the plants are wintered in a coldframe.

## Lupinus—Lupine

If one is looking for a plant a little out of the ordinary, surely the stately Lupines will fill this need, for they are among the most beautiful perennials grown. The Washington Lupine (*Lupinus polyphyllus*) is the most popular species. It grows from 2 feet to 5 feet in height and has beautiful, long spikes of pea-shaped or butterfly-like flowers covering at least 12 inches, on stems 3 feet or more high. The flowers are clear azure-blue, white or pink, with soft green leaves divided into



small, finger-like leaflets, eight to sixteen in number. The flowering spikes are produced very freely, and a border or mass of these plants when once seen in bloom, presents such a showy yet beautiful picture that it is not easily forgotten. The plants tend to spread out while growing. Healthy plants are fairly covered with the spikes which bloom throughout May and June.

**USES.** The best effect is gained by planting Lupines in masses in the border or on the banks of ponds or streams where the tall growing spikes cast a stately reflection in the water. Lupines naturalize well in woodlands and partially shaded corners. The tall spikes are handsome for cutting.

**CULTURE.** In some places Lupines, when once established, are very easy of culture, but in other localities, where the atmosphere is not moist enough, they test the skill of the gardener. They grow in any soil which does not contain lime. In Europe around railroad stations and in America along railroad tracks Lupines grow splendidly, which suggests that possibly they would succeed if mulched with soot and cinders. The roots are large and long and readily exhaust the soil of its food materials, so each year the ground should be enriched with plenty of stable manure. It is best to grow them in moist situations, but if this is not possible they should be watered well during dry weather. Lupines dislike to be moved, so they should be planted and left alone. If the flowering stalks are cut down, the plants may bloom the second time in September.

**PROPAGATION.** Lupines are easily raised from seed and the plants self-sow if the soil is not too dry. The seeds should not be covered deeply when planted and can be sown at any time. The plants can be divided or cuttings can be made by using the rather hardened wood, or side shoots. This should be done in the Spring.

**Lychnis—Campion.** Includes Ragged-robin, Maltese Cross, Rose-of-heaven, Rose C. (Cuckooflower), (Mulleinpink), (Jerusalem Cross), (Scarlet Lightning), (German Catchfly)

For the different parts of one's garden there are many good varieties of Lychnis. Two of these are known as *Agrostemma*. Ragged-robin and Cuckooflower are common names of *Agrostemma*, *Lychnis flos-cuculi*. This plant, with narrow, grasslike, grayish foliage, grows from 12 inches to 18 inches high, forming a tuft, and producing many small, delicate, tassel-like flowers in short sprays of rose or soft pink, which are very attractive to the bees of the neighborhood. Ragged-

robin is in bloom continuously from May through August. The Rose Campion, Mulleinpink, Dusty-miller, (*L.* or *A. coronaria*) is a very striking plant. The stems and leaves are a downy, silvery gray and the Pink-like flowers are a cerise-crimson. It grows 2 feet or 2½ feet tall and is in bloom during July and August.

The Maltese Cross, Jerusalem Cross or Scarlet Lightning (*L. chalcadonica*) is a tall, loose growing plant with hairy stems and leaves. The foliage is similar to that of Sweet-william and from each plant several straight, strong flower stems rise to a height of 2 feet or 3 feet with immense heads of vermilion-scarlet flowers. This is one of the most brilliant of the old-fashioned flowers. There are white-flowered forms of this species.

The German Catchfly (*L. viscaria*) grows only about 12 inches high, has dense growing, evergreen foliage and fragrant, magenta flowers. There is a sticky, viscid area below the flowers. *L. haageana* has single, orange-scarlet flowers, shaped like those of Maltese Cross and grows a foot tall. Most of these varieties have double forms which are really as interesting as the single ones.

USES. All of these varieties are used for cut flowers, in perennial borders and rock gardens. They make a fine bedding plant because the period of bloom is extended over the Summer months.

CULTURE. *Lychnis* is very easy of culture. The plants like sandy, well manured loam in full sunlight. Those varieties suitable for the rockeries grow well in dry soils. These are one of the best groups of plants for withstanding droughts.

PROPAGATION. The best method is by division of the plants in Spring, although all the varieties are easily grown from seed which blooms the second year after being sown.

## **Lysimachia—Loosestrife, Moneywort (Creeping Jenny or Creeping Charlie), (Gooseneck)**

Moneywort, Creeping Jenny and Creeping Charlie are all common names for *Lysimachia nummularia*, which is a prostrate or creeping plant and grows very rapidly. It has very showy yellow flowers and blooms from May to September. The *Clethra Loosestrife* (*L. clethroides*) is a very showy and graceful Japanese variety. It grows 3 feet high and produces long, recurved or drooping spikes of pure white flowers from July to September. The leaves take on bright autumnal colors in the Fall when the flowers are gone. The Spotted L. (*L. punctata*) is another yellow-flowered sort which is attractive. The flowers are produced in whorls around a leafy stalk.

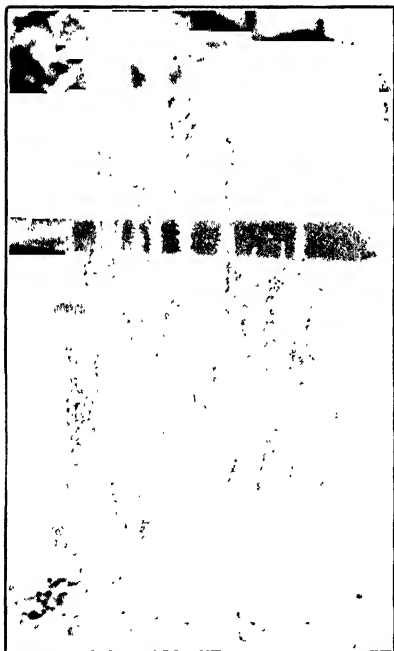
**USES.** The Loosestrife is useful for cutting for it lasts well when cut. They are useful to grow in a border, wild garden or along lake margins. There is hardly a plant which surpasses the Moneywort for covering banks, for rustic urns, vases, old stumps, or to grow in hanging baskets. The plants spread very rapidly and are very showy when in bloom. They serve as good carpeting plants for shady places under trees, but it must be admitted that they spread rapidly and may become a weed.

**CULTURE.** All of the varieties prefer moist situations and it is because of this that they grow so splendidly on stream banks or in any kind of waterside plantings. The plants do not require any care.

**PROPAGATION.** Division of the roots either in late Autumn or early Spring, is the best method of multiplication.

### **Lythrum—Purple Loosestrife (Blackblood)**

The common Purple Loosestrife (*Lythrum salicaria*) grows



from 4 feet to 6 feet tall and blooms during the months of July and August. The foliage is willowlike and the tall, erect, graceful spikes produce brightly colored, reddish-purple flowers. The Rose Loosestrife (*L. roseum superbum*) has rose-colored flowers, while Perry's variety has large and glistening cherry-red flowers.

**USES.** The Loosestrife takes care of itself when planted at watersides, margins of lakes or streams. There is hardly any plant which can equal this when it is naturalized in bogs, swampy woodlands or in wild gardens.

**CULTURE.** These plants are moisture loving and should be planted in partial shade in low lands or in swamps.

**PROPAGATION.** By stem cuttings, by seeds and division of the roots.

**Purple Loosestrife or Lythrum, unexcelled for waterside planting**

## **Mertensia—Virginia Bluebells (Virginia Cowslip) (Smooth Lungwort), (Kentucky Bluebells)**

The Virginia Bluebell is one of the loveliest of the early Spring blooming plants. In rambling through the fields and woods for Violets, large clumps of these flowers can be seen growing at random. *Mertensia virginica* is the showiest of all and the one which is most easily grown. The plants grow from 1 foot to 2 feet high, with soft, light green stems and foliage. The flowers are reddish-purple when in bud, but as the flowers open, they change to a lovely gentian-blue. They hang in drooping, nodding, graceful clusters and the individual flowers are funnel-shaped. It comes into bloom early; in fact, most of the growth is made before leaves come out on the trees.

**USES.** The Virginia Bluebell serves its best purpose when allowed to naturalize itself in shady places. It combines well in borders, or in shaded corners where it can grow as if in its own wild habitat.

**CULTURE.** Mertensias need moist soil, preferably a rich, deep, loamy soil. Although most of the growth is made in sunlight, for it grows so early in the Spring, yet the plants should be naturalized in



Every garden lover admires clumps of *Mertensia* for the shady garden

shady places and should not be disturbed when once planted. *Mertensias* are nearly always found growing in damp woods.

**PROPAGATION.** New plants are grown through division of the old ones.

## **Monarda—Beebalm, Wildbergamot (Horsemint) (Oswego-tea)**

The lovely cardinal or scarlet-red flowers of the Beebalm have for years been one of the standbys in the old-fashioned hardy garden. The "Cambridge Scarlet" variety of *Monarda didyma* is the best one to grow, attaining a height of from 2 feet to 3 feet and blooming all Summer. The whole plant is aromatic, the leaves especially having a "minty" odor. The stems are square-angled, the leaves a dark green and the flowers a vivid scarlet. The Wildbergamot (*M. fistulosa*) has a lavender flower which is more compact, somewhat resembling that of the common Clover blossoms.

**USES.** The *Monardas* are some of the most striking plants for borders or for massing against a background of shrubs. The flowers are used for cutting and often the leaves have been used in the place of tea. Many persons grow *Monarda* just because of its "minty" foliage. It also is quite an attraction to humming birds and bees.

**CULTURE.** The Beebalm forms a thick sod or mat and the plants simply refuse to be crowded out by other plants or weeds. The clumps should be divided in the Spring. Although they will grow in almost any soil or any situation, the plants are especially fine when grown near water or in moist places. The plants are easily established and are of simplest culture.

**PROPAGATION.** *Monardas* are easily divided and new plants start readily. This should be done in the Spring. Plants can also be raised from seed.

## **Myosotis—Forget-me-not, (Scorpiongrass)**

The very name Forget-me-not conveys a meaning filled with tender sentiments—sentiments which have endeared the flowers to us. The flowers are dainty and beautiful and although blue, white and pink forms can be grown, it is the dainty true blue ones which are most loved. The flowers are borne in small clusters and are very attractive against the dark green foliage of their plants.

There are two different groups of *Myosotis*; one is perennial with plants which last for a number of years; the other is biennial, and the

seeds must be sown every second year. The following are the perennial species: *Myosotis scorpioides (palustris)* which is the true Marsh Forget-me-not. This is the one found growing along stream and river banks or on the sides of ditches. It begins blooming about May and continues until Fall. *M. sylvatica* grows from 2 feet to 3 feet tall, has blue flowers with tiny yellow centers and is known as the Woodland Forget-me-not. *M. alpestris*, the Mountain Forget-me-not, is dwarf, growing from 2 to 10 inches high. The *alpestris* varieties are very widely grown, some of the common ones being Ruth Fisher, which has clusters of flowers, each 1½ inches across of an azure blue color, and dark, glossy green leaves. These plants do not spread out so much, but the bushes are more compact in their growth. They are not reliably hardy, except when kept in coldframes for the Winter. Victoria grows about 6 inches high and has clear blue flowers. All of the *Alpestris* varieties have small yellow centers in the blue flowers and begin blooming in April. *M. dissitiflora*, the Swiss F., is a biennial and also comes into bloom in April. It grows about 12 inches high and its large, exquisite blue flowers are borne in graceful sprays.

The Forget-me-nots are cheerful plants and are often combined with other flowers and bulbs which come into bloom early in Spring, such as the Daisies, Pansies, Arabis or the Golden Alyssum and the Spring bulbs—Hyacinths, Tulips and Narcissi.

**USES.** *Myosotis* grows and spreads rapidly, carpeting the ground wherever it is planted. The Woodland Forget-me-nots are very valuable for naturalizing along woodland walks or in wild gardens. The Marsh Forget-me-nots (*M. palustris*) are best naturalized in moist places along the banks of streams or beside ponds. The varieties of *M. alpestris* and *M. dissitiflora* are used in the perennial borders, are combined with bulbs or in the rock gardens, and are used as pot plants during the Winter. The flowers are also cut.

**CULTURE.** Forget-me-nots are grown similarly to Pansies, requiring damp, cool, shady places. They will grow in almost any soil and should be protected slightly during the Winter.

**PROPAGATION.** Forget-me-nots are easily raised from seed which should be sown in the Summer to insure good growth by the following Spring. These plants self-sow very readily. The plants can be divided or cuttings can be made.

## Nepeta

Those who have started to read this paragraph have done so because they are unfamiliar with the fact that *Nepeta cataria* is the Cat-

nip, or else they are reading without prejudice. There is a splendid sort of *Nepeta* for our gardens known as *N. mussini*, the Caucasian Catnip. It has spikes of deep violet-blue flowers produced in profusion at Rose time from plants which spread out over a diameter of 3 feet. The foliage is small, wrinkled and gray-green. The plants are quite prostrate. Two forms are found, one with larger leaves than the other, the smaller leaved sort being preferable. The writer has not heard of a name to distinguish the two forms. Mrs. Wilder writes, "If you are charmed with it, you have the true form; if you hate it, you have the false."

**USES.** The Caucasian Catnip is splendid for rockeries and ideal for rock walls. In the perennial border it serves as a substitute for Lavender in northern gardens. As a cut flower it is dainty.

**CULTURE.** This plant seems tolerant of neglect and is usually successful in sun or partial shade as well as adapting itself to a wide range of soil conditions.

**PROPAGATION.** Naturally some branches layer. Cuttings may be made in Spring or late Summer.

## Oenothera—Evening-primrose, Sundrops

The Evening-primroses are among the truly beautiful plants which anyone can grow in his garden. The plants grow from 1 foot to 2 feet high, spreading out and producing many satiny, Poppy four-petaled flowers of white, light rose and varying shades of yellow.

**SPECIES.** *Oenothera fruticosa* and its variety, *youngi*, have rich, golden yellow flowers produced freely from June through September. It is one of the most commonly seen Evening-primroses, growing 2 feet tall.

*Oe. speciosa* is the commoner white sort, of "lazy looking habit;" the unopened buds are drooping. The flowers, as they mature, gradually turn pink. The leaves are divided. It is interesting to watch the buds of these flowers open before our eyes at about the evening dinner hour.

*Oe. missouriensis* (Ozark Sundrops). This startling species produces golden flowers, 5 inches across, upon low, trailing plants. The flowers are followed by large, winged seed pods, so large for the size of the plant that they seem unnatural. The foliage becomes reddish in the Autumn. This sort is sometimes cataloged as *Oe. macrocarpa*.

*Oe. biennis* and *Oe. lamarckiana* are biennials which have become weeds in most gardens and for this reason they are not greatly admired,

although they are praised in European catalogs for their height and wealth of yellow blooms.

These plants open their flowers toward evening and close them in the morning, hence their common name. Most of them, however, are open through the day as well as during the evening.

**USES.** Evening-primroses are handsome plants for the rockery, for the border and for bedding designs. The flowers are fragrant and therefore are useful as cut flowers. They are beautiful when massed in front of shrubbery or planted in the wild garden, for the clusters of flowers are very fragrant and the bees are always around them.

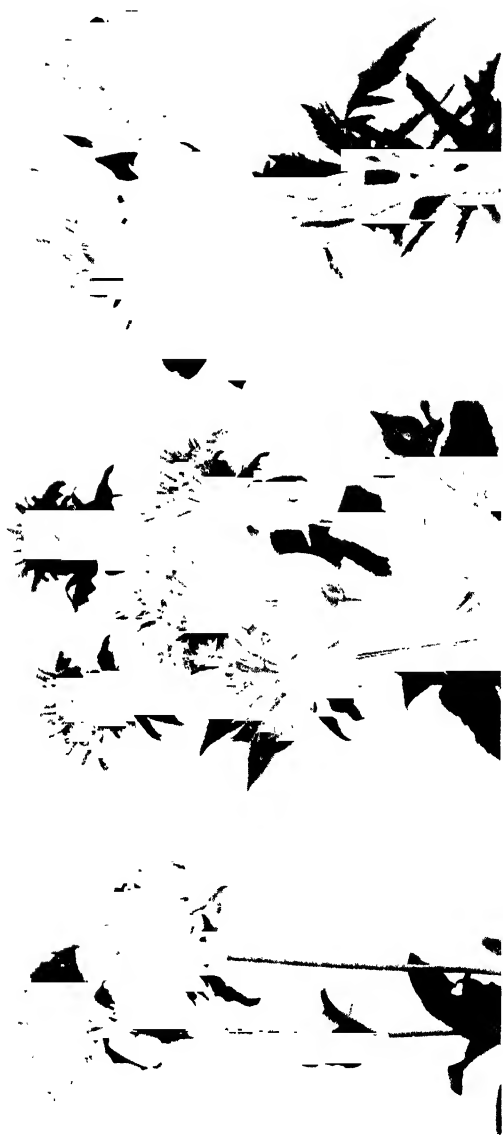
**CULTURE.** *Oenotheras* sometimes become "weeds" because the plants spread fast. They grow well in any ordinary situation, in well-drained, moderately rich soil. They need moisture and the soil should be prepared as deeply as it is possible, to get good moisture. The clumps need not be transplanted often.

**PROPAGATION.** Many of the species increase by producing small tufted plants at the base of the old ones. When the plants are divided it should be done in early Spring, in March or April. They are easily grown from seeds.



Missouri Evening-primrose or *Oenothera*, one of the largest flowers of the garden. There are other charming sorts of Evening-primroses

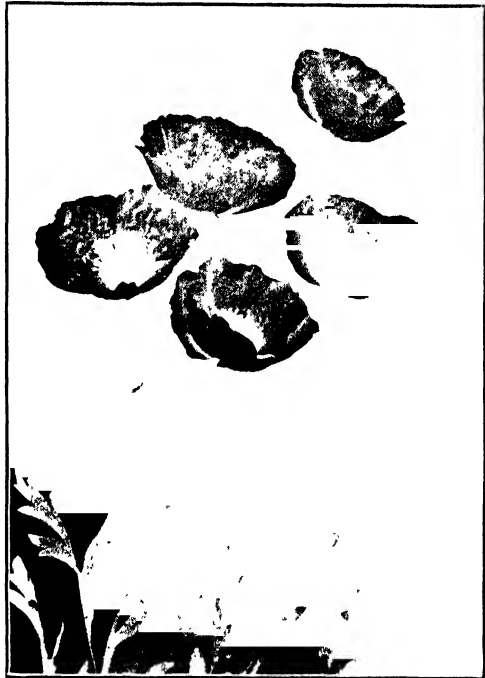




*Left*, Maltese Cross, a form of *Lychnis*, with fiery scarlet flowers of Summer; *center*, Beebalm or *Monarda*, which might be called the Humming Bird Flower, as the sweet cardinal flowers are loved by every humming bird; *right*, the blazing Oriental Poppy, whose gorgeous flowers are like Spanish dancers

## Papaver—Oriental Poppy, Iceland Poppy

There are Poppies and Poppies, old-fashioned ones and new varieties, and it would almost seem that they grow more dazzling and more gorgeous each year. Perhaps they are grown in a greater number of gardens and we see their brilliant colors everywhere during the early Summer months, or perhaps, we too have learned the secret of growing these delicate silken flowers which constantly command attention. What more startling effect could be gained than by having a mass of giant Oriental Poppies (*Papaver orientale*) stand out boldly against a dense background of dark evergreens? The colors of the named varieties range all the way from silvery white, through blush and rose-pink to salmon and scarlet-crimson, each flower swaying and nodding on long, graceful stems. The Oriental Poppy blooms during May and June, grows from 2½ feet to 4 feet high and the whole plant, from the heavy magnificent foliage to the large flower cups and seed pods, makes a majestic subject. The flowers often measure 9 or 10 inches across. Some of them have a black blotch in the center of the petals and all have a great number of purplish-black stamens in the heart of the cup. *P. bracteatum* is an important sort of a deep scarlet color. The flowers are surrounded by large, leafy bracts. *Gypsophila paniculata*, *Phlox*



Iceland Poppies, dainty edging plants with lovely colors

*subulata* (white) or golden Alyssum are good to combine with the Oriental Poppy as a border plant.

The Iceland Poppies (*Papaver nudicaule*) are dwarfer plants, growing about 12 inches high. They are also favorites in the garden for the satiny petals of white, lemon, yellow and orange are beautifully crinkled and have a delicious fragrance. They bloom all through the Summer if the flowers are kept well picked, and either single or double-flowered plants can be grown.

**USES.** Poppies make lovely cut flowers, but unless care is exercised in cutting them, the petals will droop and they will last no time. The flowers should be cut early in the morning when the buds are tight, allowing them to open up in the water. They will last several days. The giant Oriental Poppies may be cut either early in the morning, or at evening, just as the buds are about to open. They will last longer if the outer green calyx is removed.

Poppies are used to a great extent in decorative work where daring color effects are needed.

Both the Oriental and Iceland Poppies are splendid subjects for the perennial border, but should never be planted with other plants unless the colors are carefully chosen. Both are beautiful if planted in large masses by themselves. A good combination may be made with Garden Heliotrope or Valeriana.

**CULTURE.** Oriental Poppies will grow in any open, sunshiny position in a good, deep loamy soil. They are of easiest culture and require very little care. During the dry spells in the early season, they should be watered occasionally, but after they have finished blooming and the leaves begin to die down, they should be let alone for the roots seem to enjoy a thorough baking during the hottest months. When the rains begin coming in September, the roots will show signs of growth; then the plants can be safely transplanted. Oriental Poppies should be mulched in the Wintertime. This mulch does not have to be removed in the Spring for the leaves soon cover it. After the plants are once satisfactorily situated they should be allowed to remain undisturbed for a number of years.

The Iceland Poppies are very easily established for they self-sow very readily. If the flowers are cut every day, the plants will produce flowers all during the Summer months. They are extremely hardy and will grow in any soil.

**PROPAGATION.** The Oriental Poppies should be divided in the Fall after the plants have been dormant during the hot months, or in

early Spring. The roots may be cut into pieces 2 inches long and planted in sandy soil, in which case new plants may be obtained. Plants may be grown from seed, which requires a great deal of care. The seeds should be gathered as soon as the pods are ripe and begin to open. They should not be sown too thickly and should be wintered over in the coldframe. As soon as new shoots start in the Spring, pot them up, and after they have attained a good size, plant them out in the open soil from the pots.

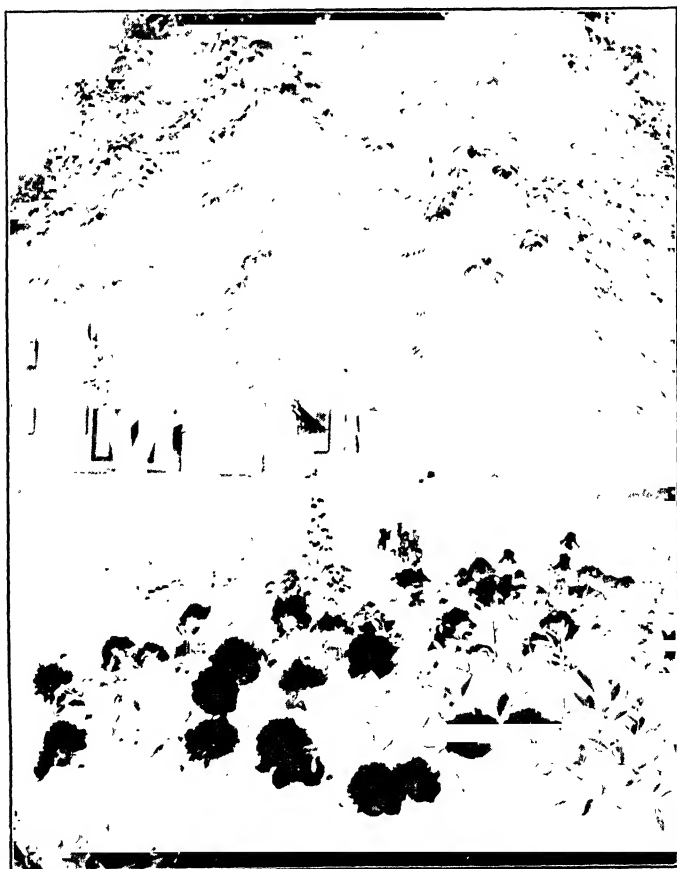
The Iceland Poppies self-sow readily.

## Peony

Peonies have captivated the world. The "old red Piney," that charming old-fashioned flower, is hardly as popular as it was in days now past, because the new, lovely and more delicately tinted varieties, which have been recently introduced, are crowding their old relative into the background. Peonies in great masses are now found growing around the small cottage out in the village or country, along roads and woodland paths, in gardens throughout the large cities and around the mansions of the wealthy where they seem to have truly assumed that aristocratic yet charming air so in keeping with the occasion. There is no other hardy flowering plant which grows in the Northern States and endures the Northern Winters as does the Peony. Massive without being coarse, fragrant without being pungent, grand without being gaudy, various in form and color, beyond the possibility of being successfully superseded, they stand in the first rank of hardy flowers.

Peonies are grown both for their flowers and beautiful foliage. From the time the red shoots first appear early in Spring, when the flowers in an almost endless number of colors are massed on the bushes, and when the glossy green foliage takes on the autumnal tints of vivid carmine, purple, amethyst and orange, Peonies are in great demand. The average height is from 2 feet to 4 feet, each plant spreading out to almost the same distance. The flowers are borne either singly or in groups of two or three. There are single blooms very much like a wild Rose, except in size; semi-double flowers and double ones which are a round mass of uneven petals. Some of the flowers are so large and heavy that it often becomes necessary to prop them up so that the Spring rains will not dash them into the mud. The leaves are smooth, dark, glossy and divided. The colors of the flowers range from purest white with a mass of golden stamens in the center through all the shades of pink to the darkest of reds and purples. There are also some pleasing yellow varieties. Many of the newer varieties are

delicately rose-scented which makes them very much more valuable because the offensive odor of the early red "Piney" has been done away with. Some of the varieties do not last very long, but if early and late varieties are planted, a succession of bloom can be had which will last for six or seven weeks. The greater majority of them are in bloom from about the middle of May on through June. The earlier



**Peonies—everybody's flower**

blooming varieties combine well with many bulbs, especially Daffodils, Narcissi, Scillas, Gladiolus and Lilies, and are very charming when planted in among the Peonies, while Michaelmas Daisies, Delphiniums, and Gaillardias make a very suitable background.

In Bulletin No. 7 of the American Peony Society there is found a list of the best Peonies as determined by a vote of the Society members. The voting is on a scale of 10. A variety receiving a rating of 10 would be almost perfect, 7 fairly good, and below 5 not worthy of cultivation. The following varieties received a rating of 8.5 or above:

WHITE	PINK, ALL SHADES	Judge Berry
9.9 Le Cygne	9.8 Thérèse	La Lorraine
9.8 Kelway's Glorious	9.7 Solange	Mme. Auguste Dessert
9.4 Mme. Jules Dessert	9.4 Tourangelle	8.5 Germaine Bigot
9.3 Festiva Maxima	9.3 Walter Faxon	La Perle
9.2 Elizabeth Barrett Browning	9.2 La Fée	Mme. Emile Gallé
9.1 Frances Willard	9.1 M. Jules Elie	Maud L. Richardson
9.0 Baroness Schroeder	9.1 Lady A. Duff	Octavie Demay
8.9 Mme. Emile Lemoine	9.0 Martha Bulloch	Opal
Pleas' Jubilee	9.0 La France	DARK RED
8.8 Alsace Lorraine	Milton Hill	9.2 Philippe Rivoire
Enchantresse	Raoul Dessert	9.0 Longfellow
Laura Dessert	8.9 Rose Bonheur	8.8 Karl Rosenfield
8.7 Albâtre	8.9 Georgiana Shaylor	M. Martin Cahuzac
Avalanche	Marie Crousse	Richard Carvel
James Kelway	Kelway's Queen	8.7 Mary Brand
8.6 Primevère	Loveliness	8.6 Cherry Hill
8.5 Marie Lemoine	8.7 Claire Dubois	Mikado
	Mignon	8.5 Adolphe Rousseau
	8.6 Albert Crousse	
	Reine Hortense	
	Eugène Verdier	

**USES.** Peonies can be used in almost any position in any garden. These plants are equally at home planted as single specimens on the lawn, in tall grass, in the woods, or planted in beds and borders with other perennials and bulbous plants, or when massed by themselves. Peonies can be planted along woodland paths, at the ends and edges of shrubbery groups, at the bases of stone walls, or along drives and walks. They are at home in almost any situation, naturalizing as readily in woodland copses as in formal gardens. They make a rather dense growth and are often used in place of low hedges.

As for cut flowers, they are absolutely invaluable. If they are cut just as the bud is about to open and are placed in a cool room, the blooms will last many days. Since the newer varieties are sweetly scented, the flowers are now used to a greater extent in homes in vases, bowls and baskets. The stems are long, stiff and are splendid to use

for decorative purposes for large functions where large flowers of rich coloring are needed.

**CULTURE.** Peonies abundantly repay good care and nourishment and do not require a great deal of care after they are once established. Preparation of the soil is one of the biggest factors in growing healthy plants. They are heavy feeders and require a deeply prepared soil. The best soil is a heavy loam, one which is not too heavy with clay or too light with sand. Stiff yellow clay, a sour soil or an abundance of fresh manure in the soil hinder the proper growth of the roots and plant. The bed should be prepared very deeply, the soil being mixed with well-rotted cow manure. Each plant should be given a space 3 feet in diameter for its development. The soil should be retentive of moisture, yet well drained, for the plants rot out if the ground is so low that the water will stand in pools around the plant during the Winter. The manure should not be mixed among the roots, but clean soil should be next to the roots and then the manure. The roots should be set in the soil so that the top eye is not more than 2 inches or 3 inches from the surface.

When the plants have finished blooming in the Summer, work must be begun to insure a good next year's crop. Weeds should be



Types of Peonies

- S.—Single, showing (g), guard petals; (s), stamens; (c), carpels or lobes of pistil.
- J.—Japanese type; stamens wider than in single.
- B.—Bomb type. The stamens become narrow petals, called petaloides.
- SD.—Semi-double. Many petaloides are quite wide and are mixed among the stamens.
- C.—Crown. The stamens are wider and petal-like. The carpels, which before have remained unchanged, are now petal-like.
- R.—Rose. In this type there is an entire transformation of the bloom.

kept down all during the Summer, for they rob the soil of its richness. The first Winter the roots are loose in the soil and will need a good coating of manure as a mulch applied after the ground is thoroughly frozen. This will prevent the roots from being heaved out of the ground, due to alternate freezing and thawing. The manure should not be allowed to remain about the plants in the Summer but worked into the soil. Diseases are spread by the presence of manure.

When once planted, Peonies should be left alone for a number of years, except for dividing and replanting, which should be done every eight or ten years.

It has been said that Peonies fade and lose their colors so readily. The delicate pink varieties fade to a white. This can be remedied by either cutting the stems when the bud is about to open, or by erecting a cheesecloth screen over the plants. This prevents the hot sunlight from bleaching out the color.

Although Peonies are free from insects, they are very subject to a pernicious bud rot. Many Peonies which do not seem able to mature their buds are affected with this disease. It can be prevented by avoiding manure about the crowns of the plants and by spraying weekly from the first signs of Spring until sometime in May. Bordeaux Mixture is the proper spray to use.

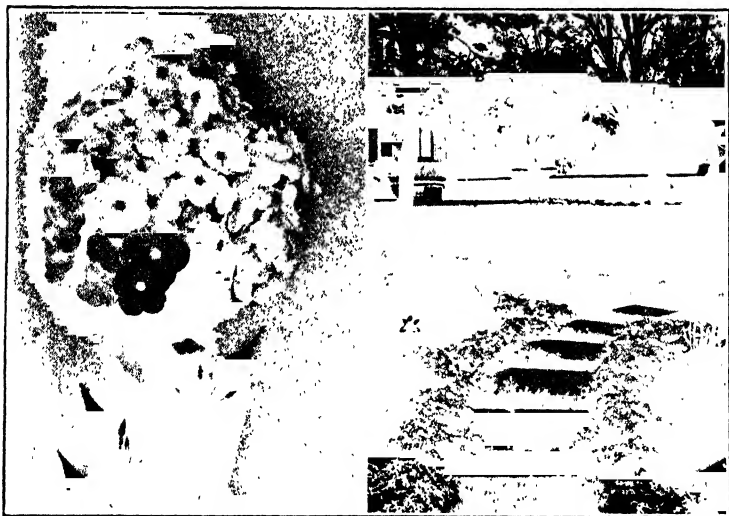
Many Peonies have two, three or more buds to a single stem. If it is a single variety they should be left as they are because the spray effect of flowers produced is very attractive. But with the large double sorts, all except the largest center bud (terminal) should be removed. This disbudding throws all the strength and food into one flower, which is larger, finer and better in color. The buds should be removed when small.

**PROPAGATION.** Peonies are usually propagated by division of the clumps, but it is a slow process, taking from three to five years for characteristic blooms to appear. The tubers or roots resemble those of Rhubarb. The best time to divide them is during September or October. However, they may be divided and transplanted any time from the middle of August until the ground freezes in the Fall. If the plants are well established they will improve every year. Peonies may be propagated by seeds which are sown as soon as they are ripe in coldframes where they should be kept for a year before transplanting. The seed should never be allowed to become thoroughly dry, for when once thoroughly dried it may take two years or longer for the seeds to germinate. The first blooms are never typical of the plants; it takes from four to eight years to produce characteristic blooms. One must remember that growing Peonies from seed is interesting, not practical.



## Pentstemon—(Beardtongue)

The Pentstemons are beautiful border plants but do not do as well in the northern states as in the southern ones, where the climate is milder and the season of blooming is longer. They are very showy, growing from 2 feet to 4 feet high, are rather bushy and have very long, slender spikes which bear many trumpet-shaped flowers with hairy throats from whence the name "Beardtongue" comes. The colors range from white, pale rose, azure-blue, lilac, coral, scarlet, violet and purple. *Pentstemon barbatus torreyi* has slender, deep scarlet-red flowers. The foliage is light green and the stems are wiry and thin, giving an airy appearance to the whole plant. *P. gloxinoides* has Gloxinia-like flowers of varying colors—rose, lilac, cherry, crimson and purple. It grows about 2 feet high and is in bloom nearly all Summer. *P. laevigatus* var. *digitalis* has white flowers with a purple throat, grows 2 or 3 feet high and blooms during June and July. *P. hirsutus* is commonly wild along roadsides in the eastern states; its lavender flowers are tubular. The Pentstemons somewhat resemble the Snapdragons, both in flower and in growth. Often the flowers are



Left, Hardy Phlox, the range of varieties giving an excellent choice of colors; right, the Moss Phlox or *Phlox subulata*, used to edge a walk

two-colored, the petals being of one color and the throat of another. The flowers last from June through October.

**USES.** Pentstemons are very free blooming and are good for cutting purposes. Their graceful growth and variety of colors make them easily adaptable to almost any perennial border. The dwarfer ones are grown in rockeries.

**CULTURE.** A good, deep garden soil mixed with leafmold or sandy loam, in a well-drained situation which is somewhat shady, is the best place to grow Pentstemons. They like plenty of water in the Summer-time. Many are hardy, but Sensation requires mulching during the Winter; even then, in the colder climates it freezes out. Good drainage and loose, loamy soil are absolutely necessary to the growth of Pentstemons.

**PROPAGATION.** They are propagated either by division, seed or cuttings. Cuttings should be taken in the Autumn, which is also the time to divide the roots. Plants may bloom the first year if the seeds are sown early. The varieties of *P. gloxinoides* are well treated as annuals, sowing the seed each year.

## **Phlox—Hardy Phlox (Flameflower), Moss Phlox (Moss Pink), (Wild-sweet-william)**

Gardens, both old and new, cannot be what they are unless Phloxes are present in all their brilliant colors to enliven the Summer months just before the Fall flowers come into bloom and after the Spring flowers have finished. Phloxes are old-fashioned favorites and each one holds a bit of sentiment within its delicate fragrance that makes us realize that they are wonderful. With the new varieties which have been introduced during the last years, the new effects in colors, the large size and gorgeousness of bloom, they have become a class of flowers unsurpassed.

The Hardy Phloxes, which are the ones most commonly grown in all gardens, are divided into two groups, those which bloom early and are known as *Phlox suffruticosa*, and those which bloom later, known as *P. decussata*. It is these two groups which have been improved so much within the last dozen years that they have now become invaluable assets to any garden. The flowers are borne in large heads or clusters at the tips of long, graceful, leafy stems which grow from 1½ to 3 feet tall. All of the flowers are very fragrant and the colors are clear.

**VARIETIES.** The following is a partial list of Hardy Phloxes which are well worth growing:

**ALBION.** Pure white, pale rose eye; large trusses.

**BARON VON DEDEM.** Scarlet-red; improvement over Coquelicot; large flowers and trusses.

**BEACON.** Bright cherry-red.

**EFFEL TOWER.** Salmon-pink, crimson eye; tall.

**ELIZABETH CAMPBELL.** Salmon-pink.

**EUROPE.** White, red center; large flowers.

**FRAU ANTON BUCHNER.** White, often pink tinged; large trusses.

**GEORGES STROEHLEIN.** Brilliant salmon; large; attractive.

**LASSBURG.** White; rather small flowers; later than Frau Anton Buchner.

**LA MAHDI.** Violet-purple (called blue).

**MME. PAUL DUTRIE.** Pale lilac-rose.

**MRS. JENKINS (Independence).** Pure white; good for massing.

**PANTHEON.** Carmine-rose.

**RICHARD WALLACE.** White, maroon center.

**RUNSTROOM.** Rose, white center; improvement over Pantheon.

**R. P. STRUTHERS.** Salmon-rose.

**TAPIS BLANC.** Creamy white; quite dwarf; large flowers; large trusses.

**THOR.** Deep salmon, shaded scarlet.

**VON HOCHBERG.** Dark crimson.

**W. C. EGAN.** Lilac, shading to soft pink; large flowers.

*Dwarf Phlox.* Almost everyone knows the Moss Phlox or Moss-pink, as it is often called (*Phlox subulata*). It is dwarf, spreading in nature, with small, moss-like leaves. As it grows it forms dense mats, 12 inches or more in diameter, which flower very freely. The normal color is magenta-pink and in April and early May the clumps are simply covered with myriads of flowers about an inch in diameter. We should grow the varieties: Vivid, larger and clearer pink; Lilac Moss, a lovely soft lilac, or the white sort.

Some of the other dwarf varieties which are good to grow are *P. amoena* with bright pink, less starlike and more circular flowers than the Moss Phlox; *P. divaricata canadensis* (Blue P. or Wild-sweet-william), with very fragrant lavender flowers and *P. d. Lapham* with larger flowers of a more intense blue-lavender.

**USES.** The Moss Phlox or *Phlox subulata* grows wild and blooms very early in the Spring. Because of its spreading habit it is usually found growing on the surfaces of rocks, in fields or over dry banks. In the rockery it is often planted in dry corners because it withstands drought so well, and its dense growth soon makes an admirable ground covering, especially when hundreds of small clusters of pink and white flowers come out in the Spring. It is also used as an edging for borders, in cemeteries, on terraces, between stepping stones and in a great many other places. *P. divaricata* is splendid for huge masses, either in wild places or the perennial border. They bloom at the same time as Tulips.

The Hardy Phloxes are all fragrant and the flowers are splendid for cutting purposes. With the new and striking colors, almost any effect can be carried out in the garden, either by planting them in solid beds where the colors grade into each other from dark to light, or in long beds along drives, woodland walks and paths, or in front of shrubbery; or combined with other perennials in hardy borders. By planting carefully, a succession of bloom, lasting from early April until late in September or October, can be carried out by just using the different varieties of Phloxes. The best effects are gained by planting masses of each color together.

**CULTURE.** Phloxes need a great amount of moisture and should be watered regularly in dry weather. It is even advised to mulch the plants during the dry Summer months to conserve what moisture is present. They should not be planted in the grass because the grass will get all the moisture. The soil should be prepared deeply to a depth of about 2 feet; it should be well-drained and moderately rich. Since Phloxes are gross feeders, good, rich soil and plenty of moisture are absolutely necessary for their growth.

The Dwarf Phlox plants should be set about 10 inches or 12 inches apart and the taller Hardy Phloxes about 18 inches apart. Young plants can be set out any time in the Spring. If the shoots are pinched back in June or July the plants will become branched and bushy, and will go on blooming until late Autumn. It takes from two to three years to obtain good-sized and well-formed plants. They should be divided and transplanted every three or four years or the blooms will begin to deteriorate and the soil will become exhausted. If the first display of flowers is cut back as soon as the blooms are faded a second crop of bloom will come on before Fall. Phloxes will grow either in full sun or in partial shade.

During damp seasons, especially when the plants are crowded, the Phloxes are sometimes attacked with mildew. As soon as the first signs of this appear, the plants can be sprayed with Bordeaux Mixture, or if powdered sulphur is dusted on the leaves in the morning when the dew is on them, it will soon check the mildew. The latter is sometimes caused by having the plants too close together so that good air circulation around the lower stems is prevented. Red spiders also attack Phlox. This can best be determined when it is noticed that the lower leaves turn a rusty brown. A forceful sprinkling with a hose on the underside of the leaves should be applied. If, however, the attack is very severe, it is best to cut the stalks back near the ground and let new growth start.

The plants should be mulched every Winter with well decayed manure.

**PROPAGATION.** Phloxes are propagated by division of the clumps, which should be done every three years, for they tend to weaken in the center; by seeds, which may give many new and interesting colors and types, but usually resulting in magentas and muddy colors; by cuttings made from the stems. Dividing of the clumps should be done in the Fall or in earliest Spring before much growth has been made.

Plants may be dug in the Fall with as many roots as possible and stored until early Spring in a coldframe or protected box. Cut the roots into 2-inch lengths and sow them thickly over the top of a flat filled with loam and sand. Cover  $\frac{1}{2}$ -inch deep with sandy soil. As soon as young plants have made a few inches of growth, transplant them to a prepared bed.

A simpler way is described by E. I. Farrington, in *Horticulture*, August 15, 1923. He writes:

Take a sharp spade, run it straight down half way; then turn it square around and cut off the roots. The roots you leave in the ground will put a head on themselves and there will be a great mass of them. Seedlings bloom the first year; these do not. In the Fall plant them out, and next year you will have fine blooming plants. If you separate the stools you take up and plant them out, you will have good plants in a year's time.

### **Physostegia—False-dragonhead (American-heather), (Obedientplant), (Mexican-heath), (Accommodationflower)**

The False-dragonhead (*Physostegia virginiana*) is another one of the few August blooming plants. It is extremely beautiful, with spikes of rosy pink, lilac or white flowers which are tube-shaped and similar to a tiny Snapdragon blossom. The buds and flowers grow on the stem as if growing on the four sides of a square. The plant grows about 3 feet or 4 feet high, spreads out and has very pretty foliage surrounding the graceful spikes. It begins blooming in July and lasts through September. A splendid sort is known as Vivid; it grows less than 2 feet tall and has dense spikes of deep colored flowers which come later than the type. The names, Obedientplant and Accommodationflower, are derived from the fact that the flowers remain at any angle at which they are turned, inasmuch as they seem pivot jointed.

**USES.** This plant is splendid in a border, but because the flowers are pale, brighter contrasting colors should be worked in around it to bring out the pink or lilac color. The flowers last for a long time



*Left*, The rampant growing False-dragonhead or *Physostegia*; *center*, Torreys Bearded-tongue or *Pentstemon*, with huge masses of graceful spikes lined with bright scarlet flowers; *right*, Balloonflower or *Platycodon*, with amusing balloon-like buds

and are very useful for cut flowers. They are good in the border because they bloom at a time when many other flowers have finished. They are especially effective near waterfalls, along stream banks, or when placed in front of dark green shrubs.

**CULTURE.** Physostegias require a rather moist soil in either sunny or shady places. The plants spread very rapidly and will tend to become a nuisance unless they are divided every year or two. They are of easy culture and should be planted about 2 feet apart in good soil.

**PROPAGATION.** Physostegias are easily started from seed, or new plants can be had when the plants are divided every year.

### **Platycodon—Balloonflower**

The Balloonflower is very closely allied to the Campanulas. It grows erect and the stems are rigid. The flowers have five petals and open out rather flat, but when in bud they look like inflated balloons, from whence the common name is derived. The flowers are both single and double. They are blue and white in color and sometimes will have blue or white veins which make them appear as if they had been streaked. They begin blooming about the middle of June and last throughout the Summer. The Chinese Bellflower or Balloonflower is known as *Platycodon grandiflorum* and grows 3 feet tall. *P. g. mariesi* has deep blue, bell-shaped flowers, some of them nearly 3 inches across, but it is more dwarf, only growing about 12 inches high. This variety is preferable to the taller sort because it does not need staking.

**USES.** Platycodons are splendid border plants, for the plants are neat and well formed and they are in bloom all through the Summer months. They are also planted among shrubbery. The flowers can be cut and last well.

**CULTURE.** These plants nearly always flower the same season they are planted. They grow readily, sending up long spikes, so that nicely shaped bushes are formed in a couple of seasons. Medium sandy loam is the best soil. Do not cut the old stems back in the Fall when the blossoms are gone, but let them die away naturally so is not to injure the crown, which should be set about one inch below the surface. Slight Winter protection is beneficial.

**PROPAGATION.** The most successful method is by seeds. The root stalk is fleshy and thick and a great deal of care must be exercised in dividing it.

### **Plumbago (See Ceratostigma)**

## **Polemonium—Greek-valerian (Jacobs-ladder) (Charity)**

Jacobs-ladder is a very ornamental and graceful flowering plant of early Spring and Summer. The flowers are blue, or white, flat or bell-shaped, and are borne in spikes; the foliage is very finely cut, much resembling fern fronds. *Polemonium caeruleum*, or the Greek-valerian, is rather bushy with long spikes, about 2 feet high, of sky-blue flowers with golden anthers. *P. reptans*, a native of our woods, is dwarf, growing 6 inches or 8 inches high, with light blue flowers which come into bloom early in April. *P. humile (richardsoni)* is very dainty and dwarf with small spikes of blue flowers growing from small rosettes of green, fernlike leaves. All the varieties bloom from April or May on through August or September.

**USES.** Most of these plants are splendid for rockeries or in low beds and borders. The taller ones are used in front of shrubs. Some are grown as alpine subjects or in wild gardens. The flowers can be cut, and with their delicate foliage, make up beautifully for vase or basket work.

**CULTURE.** Polemoniums are very easy to grow, thriving best in dry places where the soil is rich and well-drained and with some shade.

**PROPAGATION.** These plants are propagated easily from seed sown in the Fall or by dividing the plants.

## **Polygonum—Fleeceflower (Knotgrass) (Knotweed)**

The Fleeceflower is a very ornamental plant for any garden because the foliage is so beautifully tinted in Autumn. Some of the varieties grow very high and greatly resemble Bamboo in growth. *Polygonum sachalinense*, Sacaline, is one of this type, attaining a height of from 9 feet to 12 feet, with leaves 12 inches long and sprays of greenish-white flowers. The stems are curving or arched. *P. affine (brunonis)* is the dwarf variety, growing 6 inches to 18 inches high, with bright, rosy red flowers and beautifully colored foliage. *P. amplexicaule* grows about 2 feet or 3 feet tall and has deep red flowers which come into bloom very late in September and last until October. *P. cuspidatum (sieboldi) compactum* grows about 15 inches high, has small, glossy green leaves, and the entire plant is covered with small white flowers. Most of the varieties are in bloom from July through August.





**Fleeceflower or Polygonum, with its  
Buckwheat-like flowers.**

**USES.** These plants are used mostly in wild gardens or under trees, where an immense shrubby perennial is needed. They spread widely and become weedy; for this reason they should not have a place in the perennial border. The other varieties are grown in front of shrubs or herbaceous borders. Some of the dwarf ones are used in rockeries. Any of these are very effective when planted in masses, especially along banks of streams or in moist places. Some of the flowers are valued for cutting.

**CULTURE.** Some Polygonums require a great deal of space, for the plants are very large. They are moisture loving and should be planted in places where the ground is naturally very moist and does not dry out easily. They will grow almost anywhere, in any soil, and need very little attention.

**PROPAGATION.** They are propagated by seeds and division of the plant.

## **Potentilla—Cinquefoil (Fivefinger)**

Potentillas greatly resemble the Strawberry plant, especially in the manner of growth and the foliage. This is a trailing plant which covers the ground rapidly and sends out roots as it goes along. The flowers are very showy, the colors are very bright, with reds, oranges and yellows predominating. These flowers are both double and single and are borne in great profusion from June to August. The single blooms look like a Buttercup or a Strawberry flower. *Potentilla atrosanguinea*, a parent of many lovely varieties, has single, rich crimson blossoms. Miss Willmott is cerise, and William Rollison is a combination of orange and mahogany-red with double flowers. There are a great many varieties, nearly all of which have double flowers.

**USES.** Potentillas are most effective when planted in rock gardens where they can grow over large boulders of rock and need not be thinned

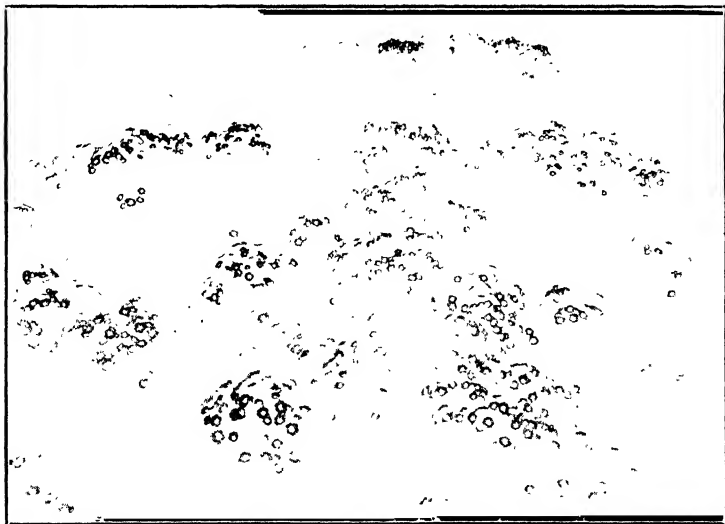
out every year. They are excellent to plant in bare places where a good ground covering is needed, for the plants grow rapidly and soon form a thick covering.

**CULTURE.** These plants should be set about 18 inches apart in any garden soil, but they do best when planted in rich, light, loamy soil. They like exposed places and will require thinning out every year. There should be a light mulch of leaves placed over the plants during Winter.

**PROPAGATION.** Potentillas send out roots along the trailing stems; hence, new plants are very easily obtained by thinning out. They are also easily grown from seed.

### **Primula—Primrose, English Cowslip, Oxlip, Polyanthus**

Hardy Primroses are showy plants which fit in well with any Spring bedding design. The small flowers are graceful and dainty and the varieties can be so chosen that they will be in bloom from April for a month. Primroses grow from 6 inches to 18 inches high and have light green, hairy leaves. The colors of the hardy sorts range



**Primroses. A mass to tempt us to imitate it**

from white to the darkest crimson and yellow. Some of the varieties are double, and others present this appearance because the petals are wavy and crinkled.

The commoner hardy sorts of Primroses are derived from *Primula elatior*, *P. veris* and *P. acaulis* (*vulgaris*). These are known as Polyanthas. These are much of one type, the flowers being borne in umbels or clusters of six to twelve flowers. There is, however, another interesting species, *P. japonica*, the Japanese Primrose, which bears the flowers so that one umbel, or cluster, is above another. The colors vary from rich dark crimson through the intermediate tints to white. The petals are of a heavy texture and waved. *P. denticulata* var. *cachemiriana*, the Indian Primrose, has pale blue flowers produced in globular heads; the underside of the leaves is golden. Almost all the varieties of Primroses are worth growing and wherever planted, they increase in beauty and interest with each succeeding year.

**USES.** Primulas make delightful subjects for the rock garden, edging a shady border or against old walls. They naturalize readily along streams, woods or shrubbery and are also suited for growing in porch boxes or in pots. The flowers are fragrant and make splendid cut flowers.

**CULTURE.** Primulas are not difficult to grow, yet they reward one for any amount of trouble. One of the first requisites is to keep the soil moist. The plants will die if they are allowed to pass through the dry Summer months without plenty of water. Primroses should be planted in rich, well drained soil in a shaded nook in order to protect the plants from the hot sunshine during the Summer. Slight protection during Winter is needed, such as a light mulching of leaves and straw. In the Fall, if the crowns of any of the plants are above the surface of the soil, these plants should be taken up and reset. Primroses resent a great deal of cultivation; good, rich soil, partially shaded quarters and plenty of moisture are all they need.

**PROPAGATION.** Primroses are usually propagated by seeds sown in March in a coldframe or in May to July outdoors in shaded places. The seed should just be scratched into the surface soil and firmed. The plants can also be divided early in Spring or in the Fall.

## **Pyrethrum—Painted Lady (Pink Daisy)**

The form of the Daisy is admired by all, so that it is strange that more persons do not grow the lovely Daisies known as Pyrethrums.

The flowers are bright in color and are borne on long stems. They might be called Spring Chrysanthemums, for they bloom principally in June. Many of the sorts are attractively doubled. The colors range from deep rich crimson to light pink and white. They grow 2 feet to 3 feet tall. The proper botanical name is *Chrysanthemum coccineum*; the catalogs also call them *Pyrethrum roseum* and *hybridum*.

USES. The English are so fond of these flowers that they have many named varieties. Of *Pyrethrums* *The Ladies' Field* writes:

"Among the most satisfactory of all the flowers in the garden we may count double *Pyrethrums*. They are of almost infinite variety, which time seems powerless to wither, and which custom never stales. Nearly every year sees some new development, the result of skillful raising and discriminating selection. They have many good qualities to recommend them. These flowers are extremely showy, and are as hardy as they are effective. They are of the easiest possible culture, and as cut flowers they are invaluable, lasting for full two weeks in full and fresh beauty. This, when one is away from one's own garden and has to barter for flowers for the good contentment of the moment, is a great desideratum. In the borders they last for several months. *Pyrethrums* are in their height of beauty in June, but by means of judicious thinning and stopping, and by the entire prevention of the formation of anything like seed, they may be kept blossoming all through the Summer. If this be too much trouble, and a continued succession is not wanted, the plants may be cut right down after their Midsummer blossoming, when they will spring up with rejuvenated vigor, and blossom gaily again in the Autumn as vigorously as if it were their first effort for the year."

CULTURE. The *Pyrethrums* grow nicely, even in partial shade, but they must have perfect drainage. An important point in their culture is alluded to above; they should be prevented from seeding and if cut down directly after they have produced their main crop of bloom, They will bloom profusely late in Summer.

PROPAGATION. Sow the seeds or divide the plants in Spring.



*Pyrethrum* or Pink Daisy

## Rudbeckia—Coneflower, Goldenglow, Brown-eyed-susan

The garden's gold is greatly enhanced in Autumn by the sorts of Rudbeckias, especially the Goldenglow, which is the double form of *Rudbeckia laciniata*. Everyone knows this common perennial and admires its wealth of bloom. One of the handsomest Coneflowers is *R. speciosa newmanni* which bears golden yellow single, Daisy-like flowers with a high purple cone in the center. It blooms from August to September and grows several feet tall. There is an interesting sort which has smooth, gray-green, Cabbage-like leaves, known as *R. maxima*. The plants grow 6 feet to 8 feet tall and bear bright yellow flowers, 4 inches or 5 inches in diameter, upon long, stiff stems. The cone at the center is often 2 inches high. The plants are a trifle tender. Another grayish sort is *R. subtomentosa*, but in this case the leaves and stems are densely covered with hair. The flowers are brilliant yellow with a chocolate center and are borne in large clusters. This sort also blooms in late Summer and early Fall. The Autumn Sun, *R. nitida*, has rich yellow flowers in which the rays are decidedly drooping. It blooms from August to October. *R. triloba*, the Brown-eyed-susan, is a biennial sort with yellow flowers which have orange or purple-brown markings and a black purple cone in the center.

*R. purpurea*, the Purple Coneflower, is discussed under *Echinacea*.

**USES.** The showy character of the plants makes them especially useful in bold masses for the border. The Goldenglow is valued where there are outbuildings, fences, and unsightly objects to be hidden. All the sorts serve admirably as cut flowers, for the stems are long, and the blooms are lasting.

**CULTURE.** The plants thrive anywhere, but are especially adapted to sunny places. When many of the sorts are cut back after flowering, they will send up a second crop of flowers.

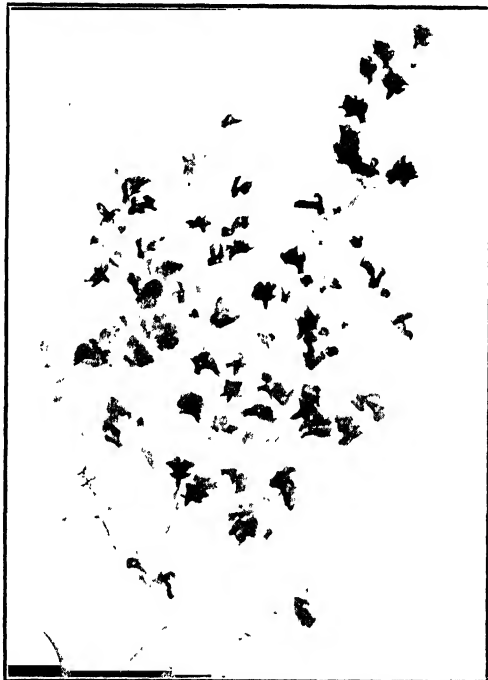
**PROPAGATION.** All the sorts, except Goldenglow, may be grown from seed, but the usual method of propagation is by division of the plants in early Spring. Some of the wild Rudbeckias, generally known as Black-eyed-susans, are biennials. These are raised from seed, but as they usually self-sow, further seeding is generally unnecessary.

## Salvia—Sage

Many persons are familiar with the Scarlet Sage and it is of this plant that many persons will think, but we shall speak here of the hardy Sages.

**LIGHT BLUE SALVIAS.** *Salvia azurea grandiflora.* This species is one of great beauty, bearing light azure colored flowers in great profusion upon tall, slender spikes. The plants grow from 3 feet to 4 feet tall and bloom from August until frost. This is a trifle too leggy in growth.

*S. farinacea*, the Mealycup S., closely resembles the former species, except that the calyx enclosing the flowers is a mealy white. It is, therefore, a splendid sort, better than the former, the blue flowers contrasting with the grayish stems and calyxes. Some persons have said that this species resembles the Lavender, but it



The Azure Sage is charming in the Fall months

is, of course, without the fragrance of true Lavender. Some gardeners advise that this sort be treated as an annual, sowing the seeds each year, as it almost never lives over Winter in the open soil.

*S. uliginosa* is also a blue sort, but the throats of the flowers are white. The plants grow 5 feet to 6 feet tall and bloom from July until frost. In general appearance it is similar to *S. azurea*.

**DEEP BLUE OR VIOLET SALVIAS.** *S. nemorosa (virgata nemorosa)*, the Violet S. The purplish-violet flowers are produced in dense clusters in July. The calyxes and stems become reddish. It is wise to cut the plants back after flowering, in which case they bloom again in Autumn.

*S. pitcheri*, a deep blue form of *S. azurea*, is greatly admired, but its name is not widely established so that many catalogs consider *S. pitcheri* a synonym of *S. azurea*.

*S. patens*, the Gentian S., is the deepest indigo-blue, a most unusual color but the large flowers are not produced in great profusion. It must be treated as an annual.

**USES.** Most sorts of *Salvias* are interesting border plants, where they make an attractive appearance grown in masses. They are generally good cut flowers as well.

**CULTURE.** *Salvias*, although of easy culture, require some attention. Except for *S. azurea grandiflora* they are not perfectly hardy and will need some protection during the Winter. Plant *Salvias* in the sun and give them from 18 inches to 2 feet on all sides. The roots of *S. patens* and *S. farinacea* may be dug and wintered in a cool cellar.

**PROPAGATION.** Some sorts may be divided in the early Spring. *S. farinacea*, *S. patens*, and *S. uliginosa* are raised from seed sown in the early Spring, in which case, they bloom the first year from seed.

## Scabiosa

To those persons who are familiar with the annual sorts of *Scabiosa*, we need only say that the perennials resemble the annuals, except that the perennials have shorter florets at the center, while in the annual sorts the flowers are made up of florets of more uniform length. *Scabiosa caucasica* is the commonest perennial with flowers either light lilac blue or white. The plants grow 2 feet to 3 feet tall. The leaves are not cut as is the case with the annual sorts. It blooms from June to September. *S. japonica* grows 1½ feet tall; the flowers are violet-blue and the leaves are somewhat lobed. *S. ochroleuca* is a sulphur colored species growing 1½ feet tall.

**USES.** The graceful, long, wiry stems of the *Scabiosa* are attractive in the border, rising as they do from a tuft of leaves upon the soil. They are best used in the front of the border. As cut flowers they are long keeping and are easily arranged in vases.

**CULTURE.** They prefer well drained locations and a sunny exposure. The plants are said to prefer limestone soil. They winter over excellently unless standing in water-logged soil.

**PROPAGATION.** *Scabiosas* are readily increased from seed or by division of the plants. The strongest plants are best raised from seed. Mr. Cecil Davies writes that "in saving seed, that produced by the central flowers should be chosen." The seeds are best sown in Spring, but the plants sometimes do not bloom until the next year.

## Sedum—Stonecrop

If there is a rocky spot in your garden you will desire a number of sorts of Sedums, for they are most interesting in habit, leaf and flower. Sedums are wild with us in America, but there are also many sorts in Europe and Asia.

**SPECIES.** Only an expert can determine the proper names for the various sorts of Stonecrop but, roughly, they may be grouped as follows:

### TINY-LEAVED SORTS:

*Sedum acre.* Goldmoss. Wallpepper. This low, tufted perennial spreads over the soil. The leaves are small, attractive, light green. The flowers, bright yellow in color, completely cover the plants and open in June and July. Surely identified from other similar ones by their peppery leaves when eaten.

*S. sexangulare* (resembles *S. acre* but with smaller plants and leaves). Leaves arranged so as to form six-angled branches.

*S. stahli* has small purple tufts of leaves.

*S. reflexum.* Jenny Stonecrop. Has longer leaves than *S. acre* and with a brownish tint.

### WIDE-LEAVED SORTS:

*Sedum spectabile.* Showy Stonecrop. This is one of the handsomest of all Sedums. It has pink or rosy-red flowers produced abundantly in flat clusters. The leaves of this sort are thick and juicy, often 3 inches long. The flowers open in late Summer and remain in bloom several months. The varieties Brilliant and atropurpureum are superior to the wild sort.

*S. sieboldi.* This sort has round, gray leaves borne in clusters of threes and pink flowers produced in September. The plants grow less than a foot tall. In the Autumn the leaves become pinkish.

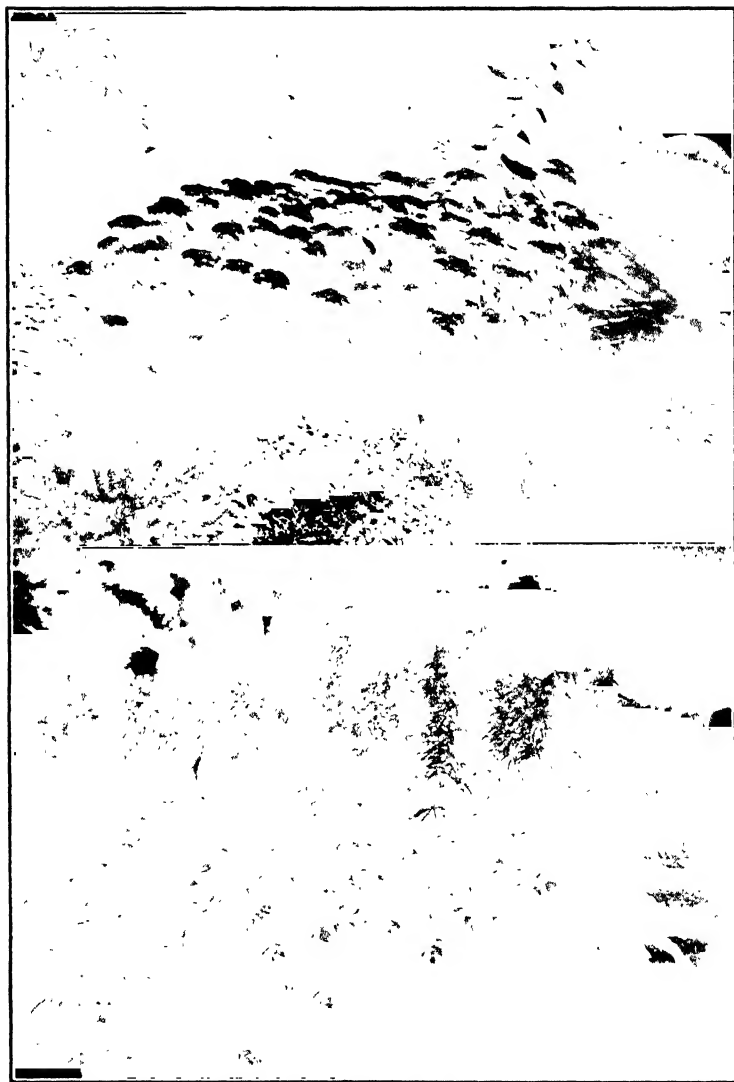
*S. kamtschaticum.* Orange Stonecrop. A sort with toothed leaves, bright yellow flowers, growing 8 inches to 10 inches tall.

*S. stoloniferum (spurium).* Running S. Branches prostrate, rather triangular leaves, flowers rosy-purple.

*S. ternatum.* Mountain S. Resembles *S. stoloniferum* but with white flowers.

**USES.** For perennial borders the Stonecrops are dainty and effective edging plants. As a cut flower the Showy Stonecrop is attractive. All the Sedums are entirely at home in the rock garden. For planting in rock steps, between stepping stones and for a ground cover the dwarf sorts are unexcelled.





*Above, the Showy Stonecrop, a graceful though sturdy plant for all gardens; below, Aruncus sylvestris or Goatsbeard, forming feathery masses of white flowers*

**CULTURE.** The Sedums generally prefer a sandy soil; at least it must be perfectly drained in Winter. Generally the Stonecrop thrives best in sunbeaten places, but many of them may be coaxed to grow in shaded places beneath trees and shrubbery.

**PROPAGATION.** The propagation is simple: each piece of the plant may be rooted and will grow into a good plant in a short time. They also grow from seed.

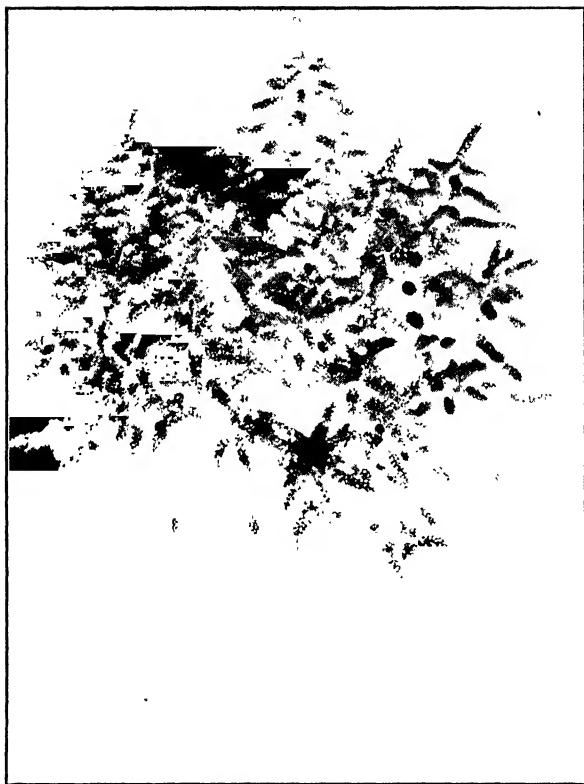
## **Spiraea—(Includes Aruncus, Astilbe, Filipendula, Ulmaria)**

There is a large group of herbaceous plants of great beauty known as Spiraeas but which should be properly known by other names. They are characterized by having attractive, airy plumes of flowers; in fact, every garden has a place for a few of them.

*Aruncus sylvester* (Goatsbeard) grows 5 feet to 7 feet tall and has feathery white flowers produced in small spikes making a wide angle with the main stem and forming large heads of bloom. It blooms from June to July. This is the *Spiraea aruncus* found in the catalogs. It is especially useful for the borders of streams in half-shaded places.

*Astilbe.* The Astilbe resembles the Aruncus superficially in the nature of its feathery flower spikes, but generally, as seen in the garden, it is not as tall. Perhaps the most popular group for outdoor planting is known as *A. arendsi*, this being an improved race derived from hybridizing many other species. The varieties found in catalogs bear rose, lilac, salmon-pink and white flowers. Some of the names are: Ceres, Juno, Kriemhilde, and Vesta. The names such as *japonica*, *davidi* and *grandis* are the species of Astilbe which are the parents of the named varieties. The plants in the garden bloom in June, July or August.

*Filipendula (Ulmaria).* Meadowsweet. The commoner species, the Dropwort, but often known as the Queen-of-the-meadows, *Filipendula (Ulmaria) hexapetala*, is a tufted, fern-leaved plant. In late June and during July the plants send up flower stalks 18 inches tall, bearing masses of white flowers. The double sort, *florepleno*, is more showy than the single. *F. purpurea* and its variety *elegans*, together with *F. palmata* have red and pink flowers produced in large clusters, the crimson flower stems growing 3 feet tall. They bloom from June to August.



The plummy sprays of *Astilbe* would grace the refined type of garden

**USE AND CULTURE.** These plants are exquisite for the border, where they lend a misty charm to almost any combination of perennials. The *Astilbes* prefer moist atmosphere during growth and excellent drainage during the Winter. They are superb pot plants. *Filipendula ulmaria*, because of its dwarf growth, is useful as an edging plant. Cut sprays of all sorts add much to a bouquet in the home. They prefer a rich soil and an abundance of water while in bloom; for this reason they are well planted at the waterside. They are at home in half shade.

**PROPAGATION.** The habit of growth by forming dense clumps suggests the easiest method of increasing the plants; that is, by dividing them with a strong knife.

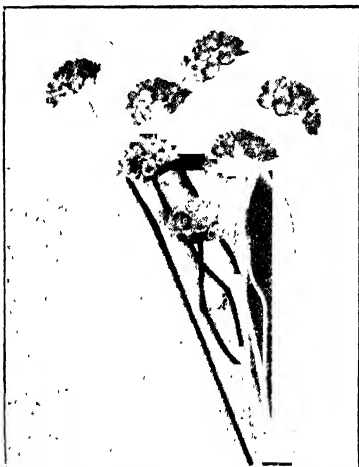
### **Statice (Armeria)—Thrift, (Sea-pink) (Cliffrose)**

The Thrift is a low growing plant which derives a common name of Sea-pink from the fact that it grows along the seashore and is pink in color. There are other colors, such as red, deep rosy pink, lilac and white. It grows in dense, low clumps with numerous, narrow, grass-like leaves, all clustered at the base, from which spring the flowers on stiff, wiry stems from 6 inches to 12 inches high. *S. armeria* is generally cataloged as *Armeria maritima* and is the common form. Rosalie Thrift or *Armeria lauchiana* has crimson flowers. They flower more or less continuously from early Spring until late in Fall.

**USES.** The Thrifts are invaluable when planted in clumps or for edging. They are also used for pot plants and in the rock garden.

**CULTURE.** They need a free, well-drained, sandy loam and leaf-soil. Best wintered in frames as they are often tender to the cold.

**PROPAGATION.** The more choice varieties are increased by dividing the roots and a good sized plant will furnish hundreds of small divisions. They produce seed but do not grow readily from seeds. If the seeds are planted in the Fall, they should be kept in the coldframe and removed to the open ground just as soon as it is in a workable condition. This will enable the plants to get well established before the hot weather arrives.



**Statice armeria or Thrift; a good edging plant**

## Stokesia—(Stokes-aster), (Cornflower-aster)

Generally we do not think of a China-aster resembling a Cornflower, but it is true that the *Stokesia* resembles them both. *Stokesia laevis* (*cyanea*) is a low plant, seldom above 1½ feet tall, and with light lavender-blue, white, purple and rose-colored flowers produced from early July to October.

**USES.** They are especially recommended for the front of a border and may be used for cut flowers.

**CULTURE.** Generally it is stated that this plant is sensitive to cold, heavy soils and seems to thrive with drought-resisting subjects, well drained in Winter. It prefers full sun.

**PROPAGATION.** When raised from seed it blooms the first year.

## Thalictrum—Meadowrue, (Feathered-columbine)

These graceful, feathery flowers add an airy appearance to the border of perennials. The leaves are fine and resemble the foliage of



Left, Meadowrue or *Thalictrum*, altogether charming for border or base; right, Globeflower or *Trollius*, like a Giant Buttercup of golden yellow

the Columbine. Some sorts are natives of our woods, but the cultivated species are superior in the size of their plumy heads.

**SPECIES.** *Thalictrum aquilegifolium*. (Columbine Meadowrue.) White flowers, June, 3 feet tall. There is a purple-flowered variety which is useful for combining with the white typical sort.

*T. minus adiantifolium*. Low M. (Maidenhair M.) Yellow flowers June to July, 1 foot.

*T. dipterocarpum*. Yunnan M. Rose-purple, yellow stamens. August to September, 5 feet. Except for this sort, the others bear no petals.

*T. glaucum*. Dusty M. Golden yellow, June to July, 4 feet. Bluish-gray leaves.

*T. dioicum*. Early M. Native, purplish and greenish, April to May, 1 to 2 feet.

**USES.** The Meadowrues are excellent for the border and, being a refined plant, may be planted in the intimate spots of the dooryard. The cut sprays are exquisite for bouquets. *T. dipterocarpum* is a sort of recent introduction with distinct flowers having petals. *T. minus* is good for rockeries and the foliage is excellent cut for bouquets.

**CULTURE.** The plants do well in well-drained shaded places. *T. dipterocarpum* is best planted in a soil which is loose, peaty or to which leafmold has been added. Being a trifle tender, this choice sort is best wintered in coldframes in the colder climates.

**PROPAGATION.** The plants are readily divided, but if seed is obtainable, it may be sown.

## Trollius—Globeflower

The Globeflower is a glorified Buttercup; its leaves and flowers resemble the Buttercup in form but are larger. Improved varieties have orange, gold, orange-red, and lemon-colored flowers, often double. The commonest species is *Trollius europaeus*, but while all the cataloged species resemble each other in form, the seasons and the colors of the flowers differ. They grow about 2 feet tall and bloom throughout the Summer, starting in late April.

**USES.** The Globeflower flourishes, both in sun and shade, and is especially at home in borders in which the soil is a trifle too damp for other plants. They are showy border plants, their neat habit and compact flowers commending them to all. We must add that they grow nicely in the ordinary garden soil, even though it be away from the waterside.

**PROPAGATION.** Except where named varieties are concerned, these can be raised from seed sown as soon as ripe. The seed is rather slow to germinate and the plants are likewise tardy in flowering. If the seed is Winter stored, it should be stratified. Old plants, and also all the choice named sorts, are easily divided into pieces with one or two crowns.

## Veronica—Speedwell

When Christ was laboring beneath the heavy cross, He faltered, and a maiden, St. Veronica, rushed forward to wipe the perspiration from His brow. The impress of His face was found upon her napkin.



Veronica. The most showy sort is *V. longifolia* var. *subsessilis*, with its tall spikes of violet

Such is the story of St. Veronica, and because the markings of some species of Veronica resemble a face, this flower was named after St. Veronica. It is a pretty story and one we recall when looking at this flower. Veronicas are excellent border and rock garden subjects. The diversity of the species renders them of use in many spots.

**SPECIES.** *Veronica longifolia subsessilis*. Clump or Japanese Speedwell. This is, perhaps, one of the most attractive of all blue-violet flowers for the border. The long spikes of bloom are 2 feet tall and are produced through July to late September.

*V. spicata* grows 1½ feet tall and bears either

in June.

*V. incana*, the Woolly S., seldom grows over a foot tall and besides having amethyst-blue flowers, it has gray foliage. It blooms in July and August.

*V. virginica*, Culvers-physic, is a tall sort, 3 to 5 feet high, producing clusters of white spikes of bloom throughout July. Often called *Leptandra virginica*.

*V. teucrium rupestris*, the Rock S., and *V. repens*, the Creeping S., are dwarf, trailing sorts carpeting the soil with green and covered with blue flowers in May and June.

Besides these species, there are a number of others listed in catalogs, but the names are quite generally mixed and oftentimes the same plants are called by different names.

USES. As already stated, the Veronicsas are superb for the perennial border and the rock garden. *V. teucrium rupestris* and *V. repens* are also good ground covers for dry banks or graves. The taller sorts are good for cutting, especially *V. longifolia subsessilis*.

CULTURE. Veronicsas are of easy culture; they usually prefer moist soil. Although they grow in poor soil, some fertilizer in the form of bonemeal will increase the size of the spikes. They generally prefer full sun, perhaps with the exception of *V. virginica* and *V. repens*.

PROPAGATION. The plants are easily divided. Seeds may be sown and some sorts root when the branches touch the soil. *V. l. subsessilis* is generally propagated from cuttings, inasmuch as it varies greatly from seed.

## Viola—(Violets and Tufted Pansies)

Modest Violets are true favorites of all. The wild sorts are eagerly sought in Springtime and the exotic ones bloom until late Fall, almost amid the early snows. The most popular species for gardens is *Viola cornuta*, the Tufted Pansy, or Horned Violet, in its various varieties. G. Wermig is the best known purple sort; Papileo is a variety which is lavender and white. T. A. Weston has produced Jersey Gem, a superior blooming sort, perfectly hardy and growing in the sun. Both in its profusion of blooms and length of season it is superior to G. Wermig. Besides these, there is a group of hardy Violas, resembling Pansies, but hardy and perennial.

Among the true species, *Viola pedata*, the Birdfoot Violet, is a popular sort growing abundantly in the soils which lack lime through the East and Middle West. It requires some skill and a knowledge of its natural needs to bring this sort into cultivation. The foliage is deeply cut and unlike that of most wild Violets. The typical form is purple but its rarer and choicer variety, *bicolor*, has a combination of rich purple on the upper half of the flower, with light lavender below.

Correvoon has produced a lovely *Viola floraiensis*, which blooms with him throughout the whole year unless covered with snow.



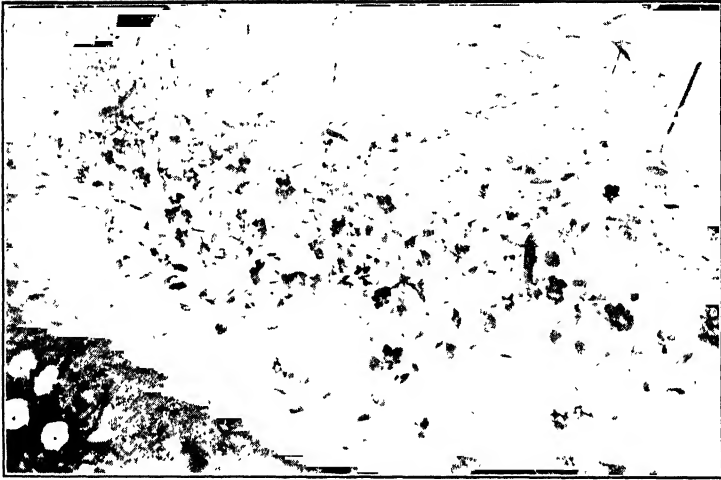
The wild sorts: *V. cucullata* is the common purple Violet; *V. canadensis*, the Canada Violet, is white touched with light purple on the reverse of the petals and is a leafy stem sort; *V. pubescens*, the Downy Yellow Violet, has hairy, leafy stems and yellow flowers; *V. rostrata*, the Longspur Violet, bears light blue flowers with darker centers and long, curving spurs; the common Sweet White Violet (*Viola blanda*) has heart-shaped leaves; *V. palmata*, is a cutleaf sort with flowers resembling the common Violet.

The Sweet Violet (*Viola odorata*) has held the admiration of the world for years. When protected they are hardy but generally it is best to place them in coldframes covered with glass. In such situations they will produce flowers all through the late Fall and Winter. It is a great pleasure to pick these Violets when all else is bare of bloom.

USES. Wild Violets may be used for naturalizing in the informal areas of the garden, even beneath shrubs. The forms of the Tufted



The gay Tufted Pansies are splendid for edging the Spring border



One of the most attractive Violas is known as Jersey Gem

Pansies, because of their long season of bloom, are excellent for edging plants. As rock garden subjects, they are unexcelled.

**CULTURE.** Generally the soil for most Violets is not difficult to satisfy. The wild sorts grow in a wide range of conditions but most Violets are associated with shaded places, although the Tufted Pansies prefer the sun.

**PROPAGATION.** *Viola cornuta* is generally propagated from cuttings placed in the coldframes in late Summer. From seed these named sorts do not breed absolutely true, although the variation is often charming. Wild Violets are propagated more often by division. The Sweet Violet is raised from cuttings made in Spring.

### **Yucca—(Adams-needle-and-thread), Spanish-bayonet**

The stiff, broad, sword-shaped leaves of *Yucca filamentosa* are familiar to all. In Midsummer the flower stalks, rising to a height of 6 feet, are also familiar. The flowers are white and pendulous. It is the personal opinion of the writer that, except when in bloom, they are

stiff, coarse and undeserving of a place in a small garden. It must be admitted, however, that they are remarkably drought-resistant, and will thrive where trees rob the soil so that more dainty plants cannot exist.

**USES.** When used at all they are best planted as specimens or among shrubbery.

**CULTURE.** They will exist for a generation, and transplant with difficulty when the plants become old as the roots go deeply.

**PROPAGATION.** Seedlings will bloom when four to five years old. As the plants sucker freely, this furnishes a ready means of propagation.



# TABULAR LIST OF PERENNIALS

INCLUDING MANY HERBACEOUS PERENNIALS NOT DISCUSSED ELSEWHERE  
THE BOOK

Name	Height in inches	Season	Color	Remarks
<i>Acaena microphylla</i> (New Zealand Bur).....	6	May	Red spines	Ground cover. Dry or moist. Spiny
<i>Acanthus mollis</i> (Bearsbreech)...	36	July-Aug.	Lilac, rose	Deeply toothed leaves. Sun. Drainage
<i>Achillea clavennae</i> .....	6-12	July-Sept.	White	Thrives in sand. Rockery
<i>filipendulina</i> (Fernleaf Yarrow)	36 +	June-Aug.	Yellow	Ferny foliage
<i>millefolium</i> (Yarrow).....	18	June +	White, rose	Adverse situations
<i>ptarmica</i> (Sneezewort).....	24	July +	White	Cut flower. Profuse. Va- rieties numerous
<i>lomentosa</i> (Woolly Y.).....	12	June	Yellow	Rockery. Woolly leaves
<i>Aconitum anthora</i> (Pyrenees Monkshood).....	18	July	Yellow	See <i>A. fischeri</i> Shady places
<i>autumnale</i> (Autumn M.).....				
<i>fischeri</i> (Azure M.).....	36	Sept. +	Pale blue	
<i>wilsoni</i> (Violet M.).....	48	Sept.	Blue	
<i>lycoctonum</i> (Wolfbane).....	36	July	Pale yellow	
<i>napellus</i> (Aconite).....	24	June	Blue, white	
<i>pyrenaicum</i> .....				See <i>A. anthora</i>
<i>Acorus calamus</i> (Sweetflag).....	24	June		Aquatic. Aromatic root. Often variegated
<i>Adaea alba</i> (White Baneberry) ..	24	April	White	Berries white. Shade. Wild
<i>rubra</i> (Red B.).....	24	April	White	Berries red
<i>Adenophora polyanthi</i> (Ladybell).	18	Aug.	Blue	Rockery. A bellflower.
<i>Adumia fungosa</i> (Climbing Fu- mitory).....	Cl.	July	Flesh	Rare Biennial. Dainty leaves and flowers
<i>Adonis amurensis</i> (Amur Adonis).	12	April	Yellow	Impatient of being moved.
<i>vernalis</i> (Spring A.).....	8-12	April	Yellow	Fine leaves. Buttercup-like
<i>Aegopodium podagraria</i> (Gout- weed).....	12	June	White	White variegated leaves. Ground cover
<i>Aethionema coridifolia</i> (Lebanon Stonecress).....	9	April	Pink	Dry sunny slopes
<i>grandiflorum</i> (Persian S.).....	12	May	Pink	
<i>pulchellum</i> .....	Tr.	April	Pink	More diffuse and trailing than first one
<i>Agrostemma</i> .....				See <i>Lychnis</i>
<i>Ajuga genevensis</i> (Geneva Bugle) ..	6	May	Blue	Shade. Carpet
<i>repans</i> (Carpet B.).....	6	May	Purple	Purpleleaf variety
<i>Alsine</i> .....				See <i>Stellaria</i>
<i>Alstroemeria aurantiaca</i> .....	36	July +	Yellow, red	Protected place. Showy
<i>Alliaria rosea</i> (Hollyhock).....	72	June	Various	Old, popular
<i>Alyssum alpestre</i> .....				See <i>A. rostratum</i>
<i>argenteum</i> (Silver A.).....	15	June-Aug.	Yellow	Silvery leaves
<i>rostratum</i> (Yellowhead A.).....	24	June +	Yellow	
<i>saxatile</i> (Goldentuft).....	18	May	Yellow	Sheets of bloom
<i>citrinum</i> .....	12	May	Citron	Rarer color
<i>compactum</i> (Dwarf G.).....	8-10	May	Yellow	Most popular Alyssum
<i>Amsonia tabernaemontana</i> .....	24	May	Pale blue	Shade. Dainty border
<i>Anaphalis margaritacea</i> (Pearl Everlasting).....	12	June	White	Gray leaves. Dry spots
<i>Anchusa barteri</i> (Early Bugloss)	24	May	Dark blue	
<i>italica</i> (Dropmore B.).....	36 +	June +	Deep blue	Shade tolerant
<i>myosolidiflora</i> (Siberian B.).....	12	May	Blue	Dwarf }
<i>Androsace lanuginosa</i> .....	Tr.	Aug.	Pink	Silver leaves. Rare

## TABULAR LIST OF PERENNIALS—Continued

Name	Height in inches	Season	Color	Remarks
<i>Anemone canadensis</i> (Meadow A.)	12 +	May	White	Wild
<i>hepensis</i> .....	12	Aug. +	Rosy	Resembls <i>A. japonica</i>
<i>japonica</i> (Japanese A.).....	36	Sept. +	Various	Popular Fall flower
<i>nuttalliana</i> (American Pasque- flower).....	8	April	Blue-purple	Rockery
<i>pennsylvanica</i> .....				Syn. <i>A. canadensis</i>
<i>pulsatilla</i> (Eur. P.).....	9	April	Blue-purple	Rockery
<i>Anemonella thalictroides</i> (Rue- anemone).....	6	April	White	Shade
<i>Anthemistindoria</i> (Yellow Camo- mile).....	18	June +	Yellow	Poor soil
<i>Anthericum liliago</i> (St. Bernard lily).....	15	May	White	
<i>Aquilegia californica hybrida</i> .....				See <i>A. formosa truncata</i>
<i>canadensis</i> (Amer. Columbine)	18 +	April	Red and yellow	Common wild. Self sows
<i>chrysantha</i> (Golden C.).....	24 +	May	Yellow	Longspur
<i>coerulea</i> (Colorado C.).....	18 +	April	Blue and white	Graceful. Good color. Long spur
<i>skinneri</i> (Mexican C.).....	12 +	April	Yellow and red	
<i>vulgaris</i> (European C.).....	18 +	April	Violet	Short spurs
<i>nivea</i> (Munstead C.).....	18	April	White	Superior white
<i>Arabis albidia</i> (Walleress).....	12	April	White	Carpet of bloom
<i>alpina</i> (Alpine Rockcress).....	12	April	White	
<i>aubrietoides</i> .....	12	April	Pink	More tender
<i>Arenaria montana</i> (Mt. Sand- wort).....	Tr.	April	White	Dry, sunny place. Rockery
<i>Arisaema triphyllum</i> (Jack-in-the pulpit).....	18	May	Purple and green	Shade. Wild
<i>Armeria</i> .....				See <i>Statice</i>
<i>Arnebia echinoides</i> (Prophet flower).....	9	May	Yellow	Rockery. Partial shade.
<i>Arnica montana</i> (Mt. Arnica).....	12	July	Yellow	Rare Rockery. Partial shade. Drainage
<i>Artemisia abrotanum</i> (Southern wood).....	24	Aug.	Yellow	Common in old gardens
<i>absinthium</i> (Common Worm- wood).....	24	Aug.	White, yellow	
<i>montana</i> (Piedmont W.).....	36	Sept.	White	White foliage for cutting
<i>purshiana</i> (Cudweed W.).....	18	Aug.	Whitish	White leaves
<i>stelleriana</i> (Beech W.).....	18	Aug.	Yellow	Finely cut white foliage
<i>vulgaris lachiflora</i> .....	48 +	Aug.	White	Fragrant. Cut flower
<i>Aruncus sylvestris</i> (Goatsbeard).....	60	June-July	White	Tallest herbaceous Spirea
<i>Arundinaria auricoma</i> (Bamboo).....	36		Leaves green and yellow	
<i>fortunei</i> .....	18		Leaves green and white	Trifle tender for north
<i>japonica</i> .....	96 +		Leaves green	
<i>metake</i> .....				Syn. <i>japonica</i>
<i>simoni</i> .....	108 +		Leaves green	
<i>Arundo donax</i> (Giant Reed).....	240		Leaves green	Tallest grass. Sometimes variegated
<i>Asarum canadense</i> (Wildginger)	5	May	Maroon	Shade. Wild
<i>Asclepias incarnata</i> (Swamp Milkweed).....	36	July	Pink	Moist places
<i>tuberosa</i> (Butterflyweed).....	24	July +	Orange	Dry, sunny places
<i>Asperula odorata</i> (Woodruff).....	12	July	White	Partial shade
<i>Asphodeline lutea</i> (Jacobs-rod).....	36	June	Yellow	Leafy stems. Onion appear- ing leaves
<i>Aster</i> .....	12-60	June +	Various	See page 00.
<i>Astilbe davidi</i> (David A.).....	60 +	June, July	Rosy	Parent of <i>A. arendsi</i> hy- brids
<i>grandis</i> (Great A.).....	60 +	June, July	White	
<i>Astrantia major</i> (Masterwort).....	12-24	May	Pink	Partial shade near running water

# TABULAR LIST OF PERENNIALS

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## TABULAR LIST OF PERENNIALS—Continued

Name	Height in inches	Season	Color	Remarks
<i>Aubrietia deltoidea</i> (Purple Rock- cress).....	6	April		Rockery
<i>Bambusa palmata</i> .....	48		Purplish	Hardy Bamboo
<i>Baptisia australis</i> (Wild-indigo)...	24	June	Leaves green	Border. Wild garden
<i>tinctoria</i> (Yellow W.).....	24	June, July	Dark blue	
<i>Belamcanda chinensis</i> (Black- berry-lily).....	36	Aug.	Yellow	Black seeds resembling Blackberry
<i>Bellis perennis</i> (English Daisy)...	4	April	Orange	Edging
<i>Belium minus</i> (Persian Daisy)	3	May+	Pink, white	Rockery. Tiny pink Daisy
<i>Bocconia cordata</i> (Plumepoppy)...	72-96	July	Rose	Among or back of shrubs
<i>Boltonia asteroides</i> (White B.)...	60-72	Sept.	Creamy	Like Wild Aster, grayish
<i>latisquama</i> (Violet B.).....	48-72	Sept.	White	leaves
<i>nana</i> (Dwarf Pinkray B.).....	24	Sept.	Pink	Best of all
<i>Bruckenthalia spiculifolia</i> (Spike- heath).....	6+	June	Pink	Heath-like
<i>Calimeris incisa</i> .....	24	July, Aug.	Purple, white	Border. Daisy
<i>Callirhoe involucrata</i> (Poppy-mal- low).....	Tr.	Summer	Rosy crimson	Mallow-like. Dry places
<i>Calluna crista</i> .....	12	July	Pink	} Acid soil
<i>vulgaris</i> (Heather).....	12	July	Purple	
<i>Caltha palustris</i> (Marshmarigold).	12	April	Yellow	Swamp places
<i>Campanula alliariaefolia</i> (Spurred Bellflower).....	12-24	June-July	White	
<i>carpatia</i> (Carpathian B.).....	8	June-Oct.	Blue, white	Edging. Rockery
<i>garganica</i> .....	Tr.	June	Light blue	Rockery
<i>glomerata</i> (Danesblood).....	18	July+	Violet	Flowers in dense heads
<i>lactiflora</i> (Milky B.).....	36	June-Sept.	Blue, white	
<i>latifolia</i> (Great B.).....	24	June	Purple	
<i>macrantha</i> (Royal B.).....	36	May	Purple	
<i>medium</i> (Canterbury-bells)...	18-24	June	Blue, white,	} Biennial
<i>calycanthema</i> (Cup-and-Sau- cer B.).....	18-24	June	rose Blue, white,	
<i>muralis</i> .....			rose	
<i>persicifolia</i> (Peachleaf B.).....	24	June-July	Blue, white	Syn. <i>C. portenschlagiana</i> Cut flower
<i>portenschlagiana</i> (Dalmatian B.).....	4	June	Blue	Rockery
<i>puloides</i> .....	6	June-July	Purple	Rockery
<i>punctata</i> (Spotted B.).....	18	June	White	Border
Marion Gehring.....	36	June+	Lavender	Spreads by underground stems
<i>pusilla</i> .....	6	June+	White, blue	Rockery
<i>pyramidalis</i> (Chimney B.).....	72	Aug.	Blue, white	Border. Background
<i>rotundifolia</i> (Harebell).....	12	June+	Blue	Rockery. Wild
<i>hostii</i> .....	18	June+	Blue	Larger flowers and stouter stems
<i>trachelium</i> (Coventry-bells)...	36	July	Purple	Biennial
<i>Cardamine bulbosa</i> (Bittercress)...	8	May	White	Wild
<i>pratensis</i> (Cuckoo-flower).....	12	April	Pinkish	
<i>Caryopteris incana</i> (Bluebeard)...	36	Sept.	Lavender	Often called Blue-spirea
<i>Cassia marilandica</i> (Wild Senna)...	60	July	Yellow	Background
<i>Catananche caerulea</i> (Cupids-dart)	18	Sept.	Blue	Everlasting. Dry places
<i>Caulophyllum thalictroides</i> (Blue Cohosh).....	24	April	Yellow	Blueberries. Shade. Wild
<i>Centaurea babylonica</i> (Syrian Cen- taurea).....	36	June-Aug.	Yellow	Silver leaves
<i>candidissima</i> .....				Syn. <i>C. cineraria</i>
<i>cineraria</i> (Dusty-miller).....	18+	Aug.	Purple	Leaves white. Edging
<i>dealbata</i> (Persian C.).....	18	July-Sept.	Rose	Ground cover
<i>gymnocarpa</i> (Velvet C.).....	18	June	Pale purple	White leaves. Edging or ground cover
<i>macrocephala</i> (Globe C.).....	48	July	Yellow	Border
<i>montana</i> (Mountain-blue).....	24	June+	Violet	Cut. Border

## TABULAR LIST OF PERENNIALS—Continued

Name	Height in inches	Season	Color	Remarks
<i>Centranthus ruber</i> (Jupitersbeard)	18	June-Aug.	Crimson, white	Rockery. Border
<i>Cephalaria alpina</i> (Yellow C.)....	72	June-Aug.	Sulphur	Flowers like Scabiosa
<i>Cerastium arvense</i> (Starry C.)....	6	June-July	White	Ground cover
<i>biebersteini</i> (Taurus C.).....	8	June	White	Edging. White leaves
<i>tomentosum</i> (Snow-in-summer).	6	June	White	Ground cover. White leaves
<i>Ceratostigma plumbaginoides</i> (Lar- pente Plumbago).....	6	Sept. +	Blue	Ground cover. Edging
<i>Cheiranthus allioni</i> (Siberian Wallflower).....	12	June +	Orange	Biennial. Rockery
<i>Chelidonium majus</i> (Celandine) ..	24	May	Yellow	Poppy-like
<i>Chelone glabra</i> (White Turtlehead).	24	Aug.	White	Moist places
<i>lyoni</i> (Pink T.).....	24	Aug.	Purplish pink	Semi-shade
<i>Chimaphila maculata</i> (Striped Pipsissewa).....	6	June	Pinkish	Spotted leaves
<i>umbellata</i> (Pipsissewa).....	6	June	White	Wild. Acid soil
<i>Chrysanthemum arcticum</i> (Arctic Daisy).....	6	Sept.	White	Dark, good foliage
<i>coccineum</i> (Painted Lady).....	24	June	Various	Cut flower. Border
<i>leucanthemum</i> (Oxeye D.).....	12	June	White	Wild Daisy
<i>maximum</i> (Shasta Daisy).....	24	June-Sept.	White	Cut flower
<i>nipponicum</i> (Nippon O. D.) ..	24	Sept.	White	Border
<i>uliginosum</i> (Giant D.).....	60	Sept.	White	Background
<i>Cimicifuga dahurica</i> (Dahurian Bugbane).....	48	July	White	Shade. Wild places
<i>foetida simplex</i> (Kamchatka B.) ..	36	Sept.	White	
<i>racemosa</i> (Cohosh B.).....	48 +	July	White	
<i>Claytonia virginica</i> (Springbeauty)	4	Mar.	Pink	Wild. Dainty. Carpet
<i>Clematis heracleafolia</i> (Tube Clematis).....	36	Aug.	Lavender	Border
<i>dauriana</i> (Fragrant T. C.) ..	24	June-Oct.	Blue	Border
<i>integrifolia</i> .....	36	June-July	White	Resembles <i>C. paniculata</i>
<i>recta</i> (Ground C.).....	10	May	White	Wild
<i>Clinionia borealis</i> (Bluebeard) ..	18	May +	Blue	A weed, but beautiful
<i>Commelina coelestis</i> (Dayflower).	12	May	White	Shade
<i>Convallaria majalis</i> (Lily-of-the- valley).....	4	May	White	Moist. Shade. Wild
<i>Coptis trifolia</i> (Goldthread).....	36	May	Yellow	Cut flower
<i>Coreopsis grandiflora</i> (Tickseed).	12	Aug. +	Pink	Rockery
<i>rosea</i> (Rose C.).....	18	July +	Yellow	Fine foliage
<i>verticillata</i> (Threadleaf C.).....	6	May	White	Shade. Berries red
<i>Cornus canadensis</i> (Bunchberry)	Tr.	June-Aug.	Pink	For dry banks. Pea-like
<i>Corydalis cheilanthisfolia, nobilis</i> (Siberian C.).....	10	June	Yellow	Rockery. Related to
<i>Crucianella stylosa</i> (Crosswort)	24	May	Yellow	{ Dicentra
<i>Cypripedium acaule</i> (Pink Lady- slipper).....	6	June +	Pink	Leaves whorled. Skunk- like odor
<i>spectabile</i> (Showy L.).....	6	May	Rose	Moist places
<i>pubescens</i> (Common Yellow L. S.).....	12	June	Yellow	
<i>Dalibarda repens</i> .....	8	June-Aug.	White	Cool, moist places
<i>Daphne cneorum</i> (Garlandflower).	12	Apr. + Oct.	Pink	Evergreen
<i>Delphinium belladonna</i> (Larkspur)	24	June-Sept.	Light blue	Cut flower
<i>bellamosum</i> .....	24	June-Sept.	Deep blue	
<i>cardinale</i> (Cardinal L.).....	36	Aug.	Scarlet	Rather tender
<i>grandiflorum</i> (Siberian L.).....	18	July-Sept.	Blue, white	Fine foliage
<i>hybrids</i> .....	60	June-Sept.	Various	Named varieties
<i>nudicaule</i> (Orange L.).....	18	July	Orange	Rather tender
<i>salix</i> (Yellow L.).....	12-24	June-July	Yellow	Tuberous
<i>Dianthus allwoodii</i> .....	12-18	June +	Various	Trifle tender in North
<i>arenarius</i> .....	6	May-June	White	Dry places
<i>barbatus</i> (Sweet-william).....	18	June	Various	Ever popular
<i>caesius</i> (Cheddar Pink).....	8-12	June +	Rose	Rockery. Border
<i>carthusianorum</i> (Carthusian P.) ..	12	June +	Crimson	Rockery

TABULAR LIST OF PERENNIALS—Continued

Name	Height in inches	Season	Color	Remarks
<i>Dianthus</i> —Cont nued				
<i>chinensis</i> (Chinese P.).....	12	July	Various	Biennial. Beds
<i>cruentus</i> (Blood P.).....	4-5	July	Scarlet	Border. Rockery
<i>deltoides</i> (Maiden P.).....	6-9	June	Rose	Rockery
<i>glacialis</i> (Ice P.).....	3-8	June	Rose	Rockery
<i>latifolius</i> (Double Cluster P.)..	12	July-Oct.	Crimson	Bedding
<i>plumarius</i> (Grass P.).....	12	June	Various	Edging
<i>superbus</i> (Lilac P.).....	24	Aug.	Pink	Rockery
<i>Dicentra canadensis</i> (Squirrel- corn).....	8	April	White	Shade. Wild
<i>cucullaria</i> (Dutchmans- breeches).....	10	April	White	Shade. Wild
<i>eximia</i> (Fringed Bleedingheart)	18	May-Sept.	Rose	Rockery. Edging
<i>formosa</i> (Western B.).....	12	May +	Light rose	Rockery. Edging
<i>spectabilis</i> (Bleedingheart).....	36	May	Pink	Shade. Border
<i>Dictamnus albus</i> (Gasplant)....	36	May	Rose, white	Don't move often
<i>Digitalis ambigua</i> (Yellow Fox- glove).....	36	June	Yellow	Perennial
<i>ferruginea</i> (Rusty F.).....	48	July	Brown	Biennial
<i>lanata</i> (Grecian F.).....	24 +	June	Gray and white	Biennial
<i>lutea</i> (Straw F.).....	24	July	Yellow	Dull color
<i>purpurea</i> (Common F.).....	48	June	Purple	Ever popular
<i>gloxinioides</i> .....	48	June	Purple	Improved <i>D. purpurea</i>
<i>monstrosa</i> .....	36	June	Purple	Large flower at tip of spike
<i>Dodecatheon meadia</i> (Shooting- star).....	15	April	Lilac	Wild. Shade
<i>Doronicum austriacum</i> (Leopard- bane).....	24	May-June	Yellow	} Earliest yellow Daisies
<i>caucasicum</i> .....	24	May-June	Yellow	
<i>plantaginum</i> .....	18	June	Yellow	
<i>Draba aizoides</i> (Whitlowgrass)..	2	March	Yellow	Alpine. Rosettes. Rare
<i>Dracocephalum ruscianum</i> (Dragonhead).....	24	June, July	Purple	Border. Mintlike
<i>Dryas octopetala</i> .....	12	July	White	Plumy seed heads. Rockery
<i>Duchesnea indica</i> (Mock-straw- berry).....	6	May +	Yellow	Red berries. Basket plant
<i>Echinacea purpurea</i> (Purple Cone- flower).....	36	Sept.	Rosy purple	Popular
<i>Echinops humilis</i> (Low Globe- thistle).....	12	July	Blue	} Globular heads. Spiny plants. Drainage
<i>ritro</i> (Steel G.).....	36	July	Blue	
<i>sphaerocephalus</i> (Common G.)..	60	July +	White	
<i>Epigaea repens</i> (Trailing-arbutus)	Tr.	April	Pink	Difficult to transplant
<i>Epilobium angustifolium</i> (Bloom- ing-sally).....	48	July	Magenta	Called Fireweed
<i>Epimedium alpinum</i> (Alpine E.)..	9	May	Crimson	} Rockery. Partial shade
<i>macranthum</i> (Longspur E.).....	15	May	White	
<i>muschianum</i> (Japanese E.).....	12	April	White	
<i>niveum</i> (Snowy E.).....	12	May	White	
<i>Eremurus bungei</i> (Desertcandle).	72 +	June	Deep yellow	
<i>elwesii</i> .....	72 +	June	Bright rose	Protection. Wonderful for specimens
<i>himalaicus</i> .....	72 +	June	White	Smaller flowers than others
<i>robustus</i> (Giant D.).....	96	June	Flesh	} Acid soil. Moist atmos- phere
<i>Erica carnea</i> (Spring Heath)...	10	June +	Rose	
<i>cinerea</i> (Twisted H.).....	6-18	June +	Purple	
<i>strida</i> (Corsican H.).....	1-4	July	Purple	
<i>Erigeron multiradiatus</i> (Flea- bane).....	6	July	Pink	Purple Daisies
<i>spectosus</i> .....	18	July +	Violet	} Shade. Perfect drainage Dry, sunny rockery
<i>Erinus alpinus</i> (Liver-balsam)...	6	May	Purple	
<i>Erodium cicutarium</i> (Heronbill)...	18	June-Aug.	Crimson	
<i>Eryngium alpinum</i> (Bluetop Eryngo).....	24	July +	Amethyst	} Prickly foliage, teasie-like heads
<i>amethystinum</i> (Amethyst E.)...	24	July +	Amethyst	



## TABULAR LIST OF PERENNIALS—Continued

Name	Height in inches	Season	Color	Remarks
<i>Eryngium</i> —Continued				
<i>giganteum</i> (Stout E.).....	36	July +	Amethyst	} Gray foliage
<i>maritimum</i> (Seaholly).....	12	July-Sept.	Pale blue	
<i>oliverianum</i> .....	36	July-Aug.	Blue	
<i>planum</i> .....	24 +	July-Aug.	Steel blue	
<i>Erysimum pulchellum</i> (Blister- cress).....	6	May +	Yellow	Dry rockery. Sun
<i>Erythronium americanum</i> (Trout- lily).....	10	April	Yellow, lilac	Spotted leaves. Shade
<i>Eupatorium ageratoides</i> .....				Syn. <i>E. urticacifolium</i>
<i>coelestinum</i> (Mistflower).....	18	Sept. +	Blue	Popular in Fall. Border
<i>perfoliatum</i> (Boneset).....	36	July	White	Wild garden
<i>purpureum</i> (Joe-pye-weed)....	72	Aug.	Purple	Wet places
<i>urticacifolium</i> (Thoroughwort)...	36	Aug.	White	Shade. Common wild
<i>Euphorbia corollata</i> (Flowering Spurge).....	18	July	White	Cut flower. Dry places
<i>cyparissias</i> (Cypress S.).....	12	June	Yellow	Fine foliage
<i>epithymoides</i> (Cushion S.)....	24	May	Yellow	Broader foliage
<i>polychroma</i> .....				See above species
<i>Filipendula hexapetala</i> (Dropwort)	12-24	June-July	White	Edging. Rockery
<i>palmata</i> (Meadowsweet).....	24-36	July	Pink, white	Border. Plumy heads
<i>Gaillardia aristata</i> (Blanketflower)	12-15	May +	Red, orange	Ever popular
<i>Galax aphylla</i> .....	6	July	White	Rockery. Acid soil
<i>Galega officinalis</i> (Goatsrue)....	36	June +	Purplish blue	Locust-like leaves
<i>Galium boreale</i> (Bedstraw).....	12	June	White	Leaves in whorls
<i>Gaultheria procumbens</i> (Winter- green).....	6	July	White	Edible leaves. Acid soil.
<i>Gentiana acaulis</i> (Stemless Gen- tian).....	4	Mar.	Blue and yel.	Red berries
<i>andrewsii</i> (Closed G.).....	18	Aug.	Purple blue	Half shade. Moist place
<i>crinita</i> (Fringed G.).....	12	Oct.	Blue	Quite uncommon wild flow- er
<i>Geranium armenum</i> (Armenian Cranesbill).....	18	May-July	Purple	Rare wild flower
<i>grandiflorum</i> (Lilac G.).....	12	June	Violet	Border
<i>ibericum</i> (Iberian G.).....	12 +	June	Blue, white	Border
<i>maculatum</i> (Spotted G.).....	9-18	July	Purple	Wild
<i>robertianum</i> (Herb Robert).....	12	June-Oct.	Rosy-purple	Wild
<i>sanguineum</i> (Bloodred G.).....	12	June-Aug.	Rosy-purple	Rockery
<i>lancastricense</i> .....	6	June-Aug.	Pink	Lighter color and more dwarf than type
<i>Geum chilense</i> (Avens).....	24	July	Scarlet	Proper name for <i>G. coccine- um</i> and <i>atrosanguineum</i>
<i>montanum heldreichii</i> .....	12	May +	Orange	
<i>Gillemia trifoliata</i> (Bowmansroot)...	36	July +	Rose	Three-parted leaves
<i>Globularia trichosantha</i> (Glob- daisy).....	6-8	July	Blue	Partial shade. Well drained
<i>Gunnera manicata</i> (Great G.)...	48			Crown of leaves. Often 25 ft. across
<i>Gypsophila acutifolia</i> (Green G.)...	24-36	July	White	Border
<i>cerastoides</i> (Mouse-ear G.).....	4	May	White and pink	Rockery
<i>paniculata</i> (Babysbreath).....	36	June-July	White	Cutting. Border
<i>repens</i> (Creeping G.).....	4-8	June-Aug.	Blush	Rockery
<i>monstrosa</i> .....	12	June-Aug.	Pale rose	Larger flowers
<i>Helenium autumnale</i> (Sneezeweed)	36	Sept.	Yellow	Many maroon and gold varieties
<i>hoopesii</i> (Orange S.).....	24	May	Orange	Smooth leaves
<i>Helianthemum album</i> .....	Tr.	June-Sept.	White	Shrubby. Evergreen.
<i>chamaecistus</i> .....	Tr.	June-Sept.	Yellow, various	Rockery. Dry banks
<i>Helianthus angustifolius</i> (Swamp Sunflower).....	36	Sept.	Yellow	Background clumps
<i>decapetalus</i> (Thinleaf S.).....	72	Aug.	Sulphur	Cut flower
<i>multiflorus</i> .....	48	Aug.	Golden	Double form. Cut flower
<i>giganteus</i> (Giant S.).....	72	Sept.	Yellow	Weedy

# TABULAR LIST OF PERENNIALS

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## TABULAR LIST OF PERENNIALS—Continued

Name	Height in inches	Season	Color	Remarks
<i>Helianthus—Continued</i>				
<i>maximiliani</i> (Maximilian S.)..	84	Oct.	Gold	Cut flower
<i>mollis</i> (Ashy S.).....	36+	Aug. +	Orange	Hairy leaves
<i>orgyalis</i> .....	72 +	Oct.	Yellow	Long, graceful foliage
<i>rigidus</i> .....				See <i>H. scaberrimus</i>
<i>scaberrimus</i> (Prairie S.)....	48	Sept. +	Gold	Semi-double usually
<i>tuberosus</i> (Jerusalem-artichoke)	60	Sept.	Yellow	Edible tubers
<i>Heliopsis helianthoides</i> .....	40	July	Deep gold	
<i>pitcheriana</i> (Pitcher II.).....	36	July +	Orange	Border
<i>scabra</i> <i>Excelsa</i> .....	36	July +	Orange	Fully double
<i>Helleborus niger</i> (Christmas-rose).	6-18	Jan.-Mch.	White, purple tinted	Flowers in snow
<i>Helonias bullata</i> (Swamp-pink) ..	12	April	Pink	Wet places
<i>Hemerocallis aurantiaca</i> (Orange Daylily).....	36	June	Orange	} Popular for border, water-side. Semi-shade
<i>dumortieri</i> .....	18	June	Bright orange	
<i>flava</i> (Lemon D.).....	24	June	Canary	
<i>fulva</i> (Tawny D.).....	36	July	Bronze	
<i>kwanso</i> .....	48	July	Orange	Semi-double
<i>middendorffii</i> (Amur D.).....	24	June	Gold	Narrow, grasslike leaves
<i>thunbergii</i> (Japanese D.).....	48	July	Canary	Late
<i>Hepatica acutiloba</i> .....	4-6	April	Bluish pink	Wild
<i>triloba</i> .....	4-6	April	Bluish pink	Wild
<i>Heracleum villosum</i> (Cow-parsnip)	144	June	White	Partial shade. Damp places
<i>Hesperis matronalis</i> (Rocket)....	36	June +	Purple	Sweet
<i>Heuchera americana</i> (Alumroot) ..	12	May	White	Wild
<i>brizoides</i> (Pinkbells).....	24	May +	Purplish	Rockery
<i>sanguinea</i> (Coralbells).....	18	July	Crimson	Rockery
<i>Hibiscus militaris</i> (Soldier Rose-mallow).....	48-72	June	Flesh	Lance-shaped leaves
<i>moscheutos</i> (Rosemallow).....	60	June	Various	Moist soil. Tolerant
<i>Hieracium aurantiacum</i> (Hawk-weed).....	18	June	Orange	Weed
<i>Hosta caerulea</i> (Blue Plantainlily)	18	May	Blue	} Popular for shade
<i>fortunei</i> (Fortune P.).....	12-24	July	Lilac	
<i>lanceifolia</i> (Lanceleaf P.).....	12-24	Aug.	Lilac	Often variegated
<i>sieboldiana</i> (Siebold P.).....	18 +	Aug.	Pale blue	Metallic blue leaves
<i>plantaginea</i> (White P.).....	12-18	Aug.	White	Common. Popular. Shade
<i>undulata</i> (Wavyleaf P.).....	12	Aug.	Lilac	Leaves generally variegated
<i>Houstonia caerulea</i> (Bluet).....	6	June	Blue	Rockery. Moisture
<i>Hypericum calycinum</i> .....	12-18	Aug.	Yellow	} Large yellow flowers with numerous stamens.
<i>moserianum</i> .....	24	July-Aug.	Yellow	
<i>patulum</i> .....				Really shrubs
<i>henryi</i> .....	36	July-Aug.	Yellow	Wild. Dainty
<i>Hypoxis hirsuta</i> (Goldeye-grass) ..	6	June	Yellow	
<i>Iberis Gibraltarica</i> (Candytuft) ..	12-24	April +	White, rosy tinted	Rockery
<i>sempervirens</i> (Evergreen C.)....	9-12	March +	White	Most popular. Rockery.
<i>tenoreana</i> (Tenore C.).....	6	April	White, becoming purple	Border
<i>Incarvillea delavayi</i> .....	18-24	May-Oct.	Rosy purple	Biennial
<i>grandiflora</i> .....	18	May-Oct.	Crimson	Protect
<i>Inula ensifolia</i> (Swordleaf I.)....	8-12	July-Sept	Yellow	
<i>glandulosa grandiflora</i> .....	18	June	Orange-yellow	Flowers 5 in. diam. Border plant
<i>Inula helenium</i> (Elecampane)....	12-18	June-July	Yellow	Large leaves
<i>royleana</i> (Blackbud I.).....	24	Sept.	Golden	Border
<i>Iris chamaeiris</i> (Dwarf).....	4-6	April	Various	Edging. Rockery
<i>cristata</i> (Crested I.).....	4-6	May	Lilac	Rockery
<i>foetidissima</i> (Gladwin I.).....	18	June	Various	Almost evergreen
<i>germanica</i> (German I.).....	24	June	Purple	Named varieties numerous
<i>interregna</i> (Intermediate I.).....	18	May	Various	
<i>kaempferi</i> (Japanese I.).....	36 +	June-July	White to purple	Moist when in bloom
<i>longipetala</i> (Coast I.).....	24	May	White, purple	

## TABULAR LIST OF PERENNIALS—Continued

Name	Height in inches	Season	Color	Remarks
<i>Iris</i> —Continued				
<i>ochroleuca</i> (Yellowband I.)....	12	May	Blue	
<i>pseudodorus</i> (Yellowflag).....	48	May-June	Yellow	Wet places
<i>pumila</i> (Dwarf I.).....				See <i>I. chamaeiris</i>
<i>sibirica</i> (Siberian I.).....	48	June	Violet, white	
<i>lectorum</i> (Roof I.).....	18	May	Blue	
<i>verna</i> (Vernal I.).....	12	April	Blue	Acid soil
<i>versicolor</i> (Blueflag).....	36	May	Violet	Wet places
<i>Jeffersonia diphylla</i> (Twingleaf)...	12	May	White	Wild. Curious lids on seed pods
<i>Kniphofia rufa</i> (Early Torchlily)....	18	June	Yellow	Not as popular as next
<i>uvaria</i> (Torchlily).....	36	Sept.	Orange	Showy. Popular.
<i>pfitzeriana</i> (Bonfire T.).....	36	Sept.	Orange scarlet	
<i>Lamium maculatum</i> (Deadnettle)....	10	July	Purple	Trailing
<i>Lathyrus latifolius</i> (Perennial Pea)...	72	July	White, pink, crimson	Rather straggling. Cut flowers
<i>Lavandula spica</i> (Spike Lavender)....	24	Aug.	Lavender	Trifle tender
<i>vera</i> (True Lavender).....	12-24	July	Blue	
<i>Leiophyllum buxifolium</i> (Sand-myrtle).....	12	May-June	White	Ground cover. Acid soil
<i>Leontopodium alpinum</i> (Edelweiss)....	9	June+	White	Great favorite
<i>sibiricum</i> (Siberian E.).....	8	June+	White	Larger flowered
<i>Lepachys pinnata</i> .....	48	Aug.	Yellow	Typical prairie plant
<i>Liatris graminifolia</i> (Grassleaf Gayfeather).....	24	Aug.	Rose purple	Bloom from top of spike downwards. Trying color. Narrow spikes
<i>pycnostachya</i> (Cattail G.).....	48	Aug.+	Rose purple	
<i>scariosa</i> .....	24+	Aug.	Purple	
<i>spicata</i> (Spike G.).....	24	Aug.	Purple	
<i>Ligularia diborum</i> .....	48	July	Yellow	Large leaves. Wet places
<i>Limonium gmelini</i> (Statice).....				Everlastings. Dainty
<i>latifolium</i> (Bigleaf S.).....	20	Aug.	Lavender	flower sprays
<i>tataricum</i> (Tartarian S.).....				
<i>Linaria alpina</i> (Alpine Toadflax)....	Tr.		Violet, orange	Rockery
<i>macedonica</i> (Macedonian L.)....	36	June	Yellow	Border. Gray leaves
<i>linum alpinum</i> (Flax).....	Tr.	May	Grey blue	Rockery
<i>favum</i> (Golden F.).....	12	June-Aug.	Gold	Rockery
<i>narbonneuse</i> (Narbonne F.)....	24	May	Blue	Rockery. Border
<i>perenne</i> (Perennial F.).....	18	June-Aug.	Blue, white	Border. Evergreen
<i>Lithospermum fruticosum</i> (Gromwell).....	3	April+	Blue	Rockery
<i>prostratum</i> .....				Syn. <i>L. fruticosum</i>
<i>Lobelia cardinalis</i> (Cardinalflower)...	24	Aug.-Oct.	Scarlet	Moist places
<i>syphillica</i> (Blue L.).....	36	July-Sept.	Blue	Wild. Popular
<i>Lunaria annua</i> (Honesty).....	18+	June	Purple	Attractive seed pods
<i>Lupinus perennis</i> (Sundial L.)....	12+	July	Blue	Wild. Acid soil
<i>polyphyllus</i> (Washington L.)....	36	June	Various	Popular. Very desirable
<i>Lychnis alpina</i> (Arctic Campion)....	6	April	Pink	Tiny form of <i>L. viscaria</i>
<i>arkwrightii</i> .....	24	June	Scarlet	
<i>chalconica</i> (Maltese Cross)....	24	July+	Scarlet	Popular. Prolific
<i>coelestis</i> (Rose-of-heaven).....	18	June, July	Rose	
<i>coronaria</i> (Rose C.).....	18	June, July	Rose purple	Cut often as <i>Agrostemma</i>
<i>haageana</i> (Haage C.).....	18	July+	Orange scarlet	Brilliant color
<i>flosculi</i> (Ragged-robin).....	15	May+	Red	Fringed petals
<i>flos-jovis</i> (Flower-of-jove).....	18	June	Rose	Border
<i>viscaria</i> (Clammy C.).....	12	June	Magenta	Viscid area under leaves
<i>splendens</i> (Double Rosepink C.).....	12	June	Rose purple	Showy
<i>Lysimachia clethroides</i> (Clethra Loosestrife).....	24	July+	White	Border. Excellent
<i>nummularia</i> (Moneywort).....	Tr.	June+	Yellow	Good under trees
<i>punctata</i> (Spotted L.).....	24	July-Aug.	Yellow	Wild. Long spikes. Wet places
<i>vulgaris</i> (Golden L.).....	24	July-Aug.	Yellow	Spikes. Wet places
<i>Lythrum salicaria</i> (Loosestrife)....	48	July-Sept.	Rose purple	Many vars. Moist soil
<i>virgatum</i> (Wand L.).....	36	July	Rose purple	

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## TABULAR LIST OF PERENNIALS—Continued

Name	Height in inches	Season	Color	Remarks
<i>Mianthemum canadense</i> (Wild-lily-of-the-valley).....	6	April	White	Wild. Shade
<i>Malva moschata</i> (Muskmallow) ..	24	June-July	Rose, white	Wild
<i>Meconopsis cambrica</i> (Welsh-poppy).....	12	June	Yellow	Rare. Desirable
<i>integrifolia</i> (Chinese-poppy) ..	36	July	Yellow	Rather tender
<i>wallichii</i> (Satinpoppy).....	36	July	Blue	Cool, moist, half shade
<i>Melissa officinalis</i> (Balm).....	12+	Sept.	White	Aromatic
<i>Menha requienii</i> (Requien Mint)	6	July	Purple	Wall crevices
<i>Menyanthes trifoliata</i> (Bogbean) ..	18	June	White	Bog garden
<i>Mertensia virginica</i> (Virginia Bluebells).....	18	May	Blue	Very useful wild plant
<i>Mitchella repens</i> (Partridgeberry) ..	Tr.	June	White	Twin berries. Evergreen
<i>Mitella diphylla</i> (Bishopscap) ..	12	April	White	Wild
<i>Monarda didyma</i> (Beebalm).....	36	July	Scarlet	Popular
<i>fistulosa</i> (Wildbergamot).....	36	June	Purple	Moist places
<i>Myosotis alpestris</i> (Alpine Forget-me-not).....	6+	June	Blue	} Always admired
<i>dissitiflora</i> (Swiss F.).....	9	May	Blue	
<i>scorpioides palustris</i> (True F.) ..	9	June	Deep blue	
<i>Nepeta mussini</i> .....	12	May-Sept.	Lavender blue	Rockery Bedding
<i>Nierembergia rivularis</i> (Whitecup)	3	June+	Creamy white	Rockery
<i>Oenothera fruticosa</i> (Sundrops) ..	18	June-July	Yellow	} Very large flowers and seed pods
<i>missouriensis</i> (Ozark S.).....	12	June-Aug.	Yellow	
<i>pumila</i> .....	6	July	Yellow	
<i>speciosa</i> .....	18	June	White	Ground cover
<i>Onopordon bracteatum</i> (Scotch Thistle).....	48-60	July	Purplish	Weedy but good
<i>tauricum</i> (Taurus T.).....	72	July	Purple	Showy
<i>Opuntia rafinesque</i> (Indianfig) ..	12	June	Yellow	Silver leaves. Showy
<i>vulgaris</i> (Indianfig).....	12	June	Yellow	Rockery
<i>Pachysandra terminalis</i> (Japanese P.).....	6	May	White	Rockery
<i>Paeonia</i> (Peony).....	18-48	June	Various	Ideal groundcover
<i>Papaver alpinum</i> (Alpine Poppy) ..	8-10	June	Yellow	See page 151
<i>nudicaule</i> (Iceland P.).....	12	June+	Yellow, orange, white	Rockery
<i>orientale</i> (Oriental P.).....	36	June	Various	Rockery. Border
<i>pilosum</i> (Olympic P.).....	24	June-Oct.	Orange	Small but profuse
<i>Paradisea liliastrium</i> (St. Bruno-lily).....	18	May	White	See <i>Anthericum</i>
<i>Parnassia palustris</i> (Grass-of-parnassus).....	8	May	White	Wild. Boggy places
<i>Pentstemon barbatus</i> .....	36	June-July	Scarlet	Popular. Long tubular flowers
<i>gloxinioides</i> (Gloxinia P.).....	24	June-Oct.	Purple	Trifle tender
<i>grandiflorus</i> (Shell-leaf P.).....	24	July	Purple	Border
<i>hirsutus</i> (Eastern P.).....	18	July+	Purplish	Wild
<i>laevigatus</i> (Smooth P.).....	24	June	Rosy lilac	Border
<i>digitalis</i> (Foxglove P.).....	36	June-July	Purple	Border
<i>torreyi</i> (Torrey P.).....	36	June-July	Scarlet	Little tender
<i>Phlox amoena</i> (Amoena P.).....	6	June	Rose	Rockery. Better than P. <i>subulata</i>
<i>arendsi</i> (Arends P.).....	24+	May+	Various	Border
<i>divaricata</i> (Blue P.).....	12+	May	Lavender	Wild but splendid in cultivation
<i>glaberrima</i> (Smooth P.).....	36	June	Various	Smooth leaves, earlier than standard types of garden Phlox
<i>paniculata</i> (Garden P.).....	24+	July+	Various	Many varieties, see page 158
<i>pilosa</i> (Downy P.).....	12	June	Pink	Rockery
<i>stolonifera</i> (Creeping P.).....	8	June	Pink	Rockery
<i>subulata</i> (Moss Phlox).....	6	May	Rose purple	See vars. page 158

## TABULAR LIST OF PERENNIALS—Continued

Name	Height in inches	Season	Color	Remarks
<i>Physalis alkekengi</i> (Strawberry Groundcherry).....	24	July	White	Orange-scarlet fruits
<i>franchetii</i> (Lantern G.).....	24	July	White	Coral red fruits
<i>Physostegia virginiana</i> (False- dragonhead).....	36	July-Sept.	Pink	Cut flower
<i>Vivid</i> .....	18	July-Oct.	Brighter pink	Border
<i>Platycodon grandiflorum</i> (Balloon- flower).....	24	May-Oct.	Violet, white	Border
<i>mariesii</i> .....	12	May-Oct.	Violet, white	Superior, does not need stakes
<i>Plumbago larpentae</i> .....				Syn. <i>Ceratostigma</i>
<i>Podophyllum peltatum</i> (May- apple).....	12	May	White	Shade. Wild
<i>Polemonium caeruleum</i> (Greek- valerian).....	18 +	June	Blue, white	Border. Flat flowers in spikes
<i>humile</i> (Dwarf P.).....	6	Aug.	Pale blue	Rockery
<i>repens</i> (Creeping P.).....	6	May	Blue	Wild
<i>richardsoni</i> .....				Syn. <i>P. humile</i>
<i>Polygonatum biflorum</i> (Solomon- seal).....	12	June	Greenish	} Moist places. Wild flowers
<i>commutatum</i> (Great S.).....	30	May	White	
<i>multiflorum</i> (European S.).....	24	May	White	
<i>Polygonum affine</i> (Fleeceflower).....	18	Sept.	Rose	
<i>compactum</i> .....	72	Aug.	White	} Weedy. Rampant. Wild garden
<i>cuspidatum</i> (Japanese F.).....	72	Aug.	White	
<i>sachalinense</i> (Sacaline).....	72	Sept.	Greenish	
<i>sieboldii</i> .....				
<i>Potentilla atrosanguinea</i> (Cinque- foil).....	18	June	Crimson	Rockery
<i>formosa</i> .....				see <i>P. Nepalensis</i> .
<i>Nepalensis</i> (Nepal C.).....	24	June-Aug.	Rose	Rockery. Border.
<i>rupestris</i> (Cliff C.).....	18		White	Rockery.
<i>tridentata</i> (Wineleaf C.).....	6	June	White	Ground cover. Rockery.
<i>Primula acaulis</i> (Eng. Primrose).....	6		Various	} Gray, ear-shaped leaves
<i>auricula</i> .....	12	June	Various	
<i>corioides</i> (Bigleaf P.).....	12	May	Red, purple	
<i>denticulata</i> (Himalayan P.).....	10	May	Violet	
<i>cashmiriana</i> (Kashmir P.).....	12	May	Lilac	Rockery
				Yellow-mcaly underside of leaves
<i>elatior</i> (Oxlip P.).....	9	April	Various	} Mealy-white foliage
<i>farinosa</i> (Birdseye P.).....	6	June	Pale purple	
<i>frondosa</i> .....	4	May, June	Rosy lilac	
<i>japonica</i> (Japanese P.).....	24	June	White to crimson	
<i>pulverulenta</i> (Silverdust P.).....	24	June	Rosy purple	Moist soil. Cool places
<i>veris</i> (Cowslip P.).....	9	April-May	Yellow	} Syn. <i>P. acaulis</i> Rockery. Border
<i>vulgaris</i> .....				
<i>Prunella grandiflora</i> (Selfheal).....	6	Aug.	Purple	
<i>Pulmonaria angustifolia</i> (Cowslip Lungwort).....	12	April +	Blue	
<i>officinalis</i> (Common L.).....	12	April	Pink	} Tolerate shade. Any soil
<i>saccharata</i> (Bethlehem L.).....	12	May	Pink to blue	
<i>Pyrethrum roseum</i> .....				
<i>Pyrola elliptica</i> (Shinleaf).....	4	May	White	See <i>Chrysanthemum coc- cineum</i>
				Ground cover. Evergreen.
<i>Ramondia pyrenaica</i> (Rosette- mullein).....	6	May	Violet	Wild.
				Rockery. Hairy leaves.
<i>Ranunculus aconitifolius</i> (Aconite Buttercup).....	12	May	White	Good drainage
<i>acris</i> (Tall Buttercup).....	24	May	Gold	Rockery
<i>flore pleno</i> .....	24	May	Gold	Common. Wild
<i>repens flore pleno</i> (Double Creeping B.).....	6	May-June	Gold	Double
<i>Rheum palmatum tanguticum</i> (Tangutian Rhubarb).....	96	June, Sept.	Greenish	Shiny leaves
				Large leaves

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## TABULAR LIST OF PERENNIALS—Continued

Name	Height in inches	Season	Color	Remarks
<i>Romneya coulteri</i> (Canyon-poppy)	48	June +	White	Large poppy
<i>Rosmarinus officinalis</i> (Rose- mary).....	24	April	Blue	Protect
<i>Rudbeckia hirta</i> (Black-eyed- susan).....	24	Aug. +	Orange	Biennial. Wild
<i>laciniata</i> (Golden Glow).....	60	July-Sept.	Orange	Cut flower. Double
<i>maxima</i> (Great Coneflower)...	60	June-Sept.	Yellow	Gray leaves. Unusual
<i>nitida</i> (Autumn Sun).....	60	Aug.-Oct.	Primrose	
<i>purpurea</i> .....				Syn. <i>Echinacea</i>
<i>spectosa (newmanni)</i> (Showy C.)	36	July-Oct.	Golden	Border
<i>subtomentosa</i> (Sweet C.).....	48 +	July +	Yellow	Border
<i>Ruta graveolens</i> (Rue).....	18	July	Yellow	Gray leaves. Herb
<i>Sagina subulata</i> (Pearlwort).....	6	July +	White	Rockery-evergreen. Shade
<i>Salvia azurea grandiflora</i> (Azure Sage).....	48	Aug. +	Light blue	Trifly leggy
<i>argentea</i> (Silver S.).....	24-48	June	Rosy white	
<i>farinacea</i> (Mealcup S.).....	36	Aug. +	Light blue	Mealy stems and calyx. Half-hardy
<i>greggi</i> (Autumn S.).....	36 +	Sept.	Red	Rather tender
<i>memorosa</i> (Violet S.).....	24	Sept.	Purple	Border. Bushy
<i>officinalis</i> (Garden S.).....	18	Aug.	Purple	Gray, wrinkled leaves. Herb
<i>patens</i> (Gentian S.).....	12-24	Sept.	Deep blue	Half-hardy
<i>pitcheri</i> (Pitcher S.).....	24	Aug. +	Deep blue	Resembles <i>S. azurea</i> but deep blue
<i>pratensis</i> (Meadow S.).....	48	June-Aug.	Blue	Border
<i>sclovea</i> (Clary).....	24-36	Aug.	Bluish white	Biennial. Large, grayish leaves
<i>turkestanica</i> .....	36	July	White, pale pink	Half hardy
<i>uliginosa</i> (Bog S.).....	36	Aug. +	Pale blue	Similar to <i>S. azurea</i> Syn. <i>S. nemorosa</i>
<i>virgata</i> (Oriental S.).....				
<i>Sanguinaria canadensis</i> (Blood- root).....	8	April	White	Wild. Rockery
<i>Santolina chamaecyparissus</i> (Lav- ender-cotton).....	18	July	Yellow	Silver, evergreen leaves
<i>Saponaria ocyroides</i> (Rock Soap- wort).....	4	June	Pink	Rockery
<i>officinalis fl. pl.</i> (Bouncing-bet)	24	July	Pink	Weedy
<i>Sarracenia purpurea</i> (Pitcher- plant).....	8	June	Purple	Bog
<i>Satureia alpina</i> (Alpine Savory)...	6	July +	Purple	Cataloged as <i>Calamintha</i>
<i>Saxifraga aizoon</i> (Aizoon S.).....	12	June	Cream	
<i>cordifolia</i> (Heartleaf S.).....	12	April	Purple	
<i>crassifolia</i> (Leather S.).....	12	April	Purple	
<i>ligulata</i> (Rajah S.).....	12	May	White	For rockeries. Some with large leaves, others re- sembling Sedums
<i>longifolia</i> .....	12 +	June	White	
<i>megasea</i> (Rockfoil).....	15			
<i>peltata</i> (Umbrella S.).....	24 +	May	Pink	Damp, shady places
<i>umbrosa</i> (London-pride S.).....	12	May	Flesh	Half-hardy
<i>virginensis</i> (Virginia S.).....	8	May	White	Native. Moist rocks
<i>Sabiosa caucasica</i> .....	24	June-Sept.	White, lavender	Cut flower. Border
<i>graminifolia</i> .....	18	June +	Violet	Silver leaves
<i>japonica</i> (Japanese S.).....	24	June-Sept.	Lavender	
<i>Scutellaria alpina lupulina</i> (Skull- cap).....	9	Aug.	Yellow	Rockery. Border
<i>baicalensis</i> (Baikal S.).....	12	July	Blue	
<i>Sedum acre</i> (Goldmoss).....	4	June	Yellow	Most common. Leaves taste peppery
<i>aizoon</i> (Aizoon Stonecrop).....	12	Aug.	Yellow	Erect stems
<i>album</i> (White S.).....	3	June	White	
<i>anglicum</i> (English S.).....	1-2	July	Pink	
<i>dasyphyllum</i> (Leafy S.).....	3	June	Pink	
<i>ewersi</i> (Ewers S.).....	4	June	Violet	Broad leaves
<i>kamtschaticum</i> (Orange S.).....	12	June	Orange	Broad leaves, erect stems

## TABULAR LIST OF PERENNIALS—Continued

Name	Height in inches	Season	Color	Remarks
<i>Sedum lydium</i> (Lydian S.).....	2	June	White	Tiny. Rockery
<i>glaucum</i> (Mealy-mat).....	4	June	White	Gray leaves
<i>maximowiczii</i> (Amur S.).....	12	July	Yellow	Border. Rockery. Wide leaves
<i>maximum</i> (Great S.).....	12 +		White	Broad leaves
<i>oppositifolium</i> (Two-row S.)...	6	Aug.	White	
<i>pilosum</i> .....	2-3		Rose	
<i>pulchellum</i> (Texas S.).....	6	July	Purplish, rose	
<i>reflexum</i> (Jenny S.).....	12	July	Yellow	Narrow leaves. Wide leaves
<i>sexangulare</i> (Hexagon S.).....	2-3		Gold	Tiny leaves
<i>sieboldii</i> (Siebold S.).....	6-8	Aug.	Rose	Leaves in whorls. Very attractive
<i>spectabile</i> (Showy S.).....	18 +	Sept. +	Rose, crimson	Wide leaves
<i>spurium</i> .....				Syn. <i>S. stoloniferum</i>
<i>stahlii</i> (Stahl S.).....	4	Aug.	Yellow	Purplish leaves
<i>stoloniferum</i> (Running S.).....	4	June	Pink	Broad leaves
<i>telephioides</i> (Wild Liveforever)...	12	Aug.	Purple	Erect stems. Wide leaves
<i>telephium</i> (Liveforever).....	12-18	Aug.	Purple	
<i>ternatum</i> (Mountain S.).....	6	July	White	Wide leaves
<i>Sempervivum arachnoideum</i> (Spi- derweb Houseleek).....	6-12	July	Pale purple	Cobwebby covering on young leaves
<i>soboliferum</i> (Hen-and-chickens)...	6	July	Yellow	Rockery. Rosettes of
<i>tectorum</i> (Roof H.).....	6-12	July	Purple	thick leaves
<i>Shortia galacifolia</i> (Oconee-bells)...	9-12	May	White	Acid soil
<i>Sidalcea candida</i> (Prairie-mallow)...	36	July	White	Popular border
<i>malvaeflora</i> (Checkerbloom).....	12-60		Rose pink	
<i>listeri</i> (Satin C.).....	12-60		Rose pink	Fringed petals
<i>Silene acaulis</i> (Moss Campion)...	3	May +	Pink	Tiny leaves. Rockery
<i>alpestris</i> (Alpine Catchfly).....	4-6	May +	White	Rockery
<i>asterias grandiflora</i> (Crimson Globe C.).....	36		Scarlet	
<i>pennsylvanica</i> (Peatpink).....	12	June	Red	Light soil. Wild. Often called Firepink
<i>quadrifida</i> .....	3	June +	White	Rockery
<i>saxifraga</i> (Saxifrage C.).....	3	July	Flesh	Rockery
<i>schafta</i> (Schaffa C.).....	8	June-Sept.	Rose	Rockery
<i>Silphium laciniatum</i> (Compass- plant).....	72	July-Sept.	Yellow	Typical prairie plant
<i>perfoliatum</i> (Cup Rosinweed)...	48-60	July-Aug.	Yellow	Coarse
<i>Sisyrinchium angustifolium</i> (Blue- eyed-grass).....	12	June	Blue	Dainty. Wild
<i>Smilacina racemosa</i> (False Sol- omonseal).....	12	May	Yellow	Native. Shady places
<i>Soldanella alpina</i> (Moonwort).....	3	June	Violet	Alpine. Peaty soil. Rare
<i>Solidago alpestris</i> (Alpine Golden- rod).....	4-18	Aug.	Yellow	Popular wild flowers
<i>altissima</i> (Tall G.).....	- 72	Aug.	Yellow	worthy of cultivation.
<i>betonica</i> .....				Stand drought
<i>caesia</i> (Wreath G.).....	24	Sept.	Yellow	Syn. <i>S. grandiflora</i>
<i>canadensis</i> (Canada G.).....	36	Aug.	Yellow	Popular wild flowers
<i>rigida</i> (Stiff G.).....	36	Sept.	Yellow	worthy of cultivation.
<i>virgaurea</i> (Goldwing).....	60	Sept.	Bright yellow	Stand drought.
<i>Stachys grandiflora</i> (Betony).....	12-36	June	Purple	Borders
<i>lanata</i> (Woolly B.).....	12	July	Purple	White silky leaves
<i>Statice armeria</i> (Thrift).....	6	June +	Pink	For plants usually listed
<i>laueana</i> (Rosalie T.).....	9	June +	Rose	as <i>Statice</i> see <i>Limnium</i>
<i>montana</i> (alpina).....	8		Pale pink	Here belong the <i>Armeri-</i>
<i>plantaginea</i> (dianthoides).....	18	June	Pink	as of catalogs
<i>pseudomarmeria</i> .....	9-12	June +	Crimson	<i>A. formosa</i> .
<i>Stenananthum robustum</i> (Feather- fleece).....	24-36	July	White	Native
<i>Stokesia cyanea</i> .....				See <i>S. laevis</i>
<i>laevis</i> (Stokes-aster).....	12-24	Aug.	Lavender, white	Cut flower. Border
<i>Symphyandra hofmanni</i> .....	12-24	July	White	Biennial. Resembles <i>Cam-</i> <i>panula</i>

# TABULAR LIST OF PERENNIALS

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## TABULAR LIST OF PERENNIALS—Continued

Name	Height in inches	Season	Color	Remarks
<i>Tanacetum vulgare</i> (Tansy).....	48	June	Yellow	Old medicinal plant
<i>Teucrium chamaedrys</i> (German- der).....	12 +	July	Rosy purple	Rockery. Border
<i>Thalictrum aquilegifolium</i> (Col- umbine Meadowrue).....	12-36	May +	White, purple	} Dainty foliage; plummy flowers. Splendid border plants
<i>dipteroarpum</i> (Yunnan M.)...	48	Aug. +	Lilac	
<i>glaucom</i> (Dusty M.).....	24 +	June +	Yellow	
<i>minus</i> (Low M.).....	12	June +	Yellow	
<i>polygamum</i> (Tall M.).....	36	May	White	
<i>Thermopsis caroliniana</i> .....	48	June-July	Yellow	Fall pea-like plants
<i>Thymus serpyllum</i> (Mother-of- thyme).....	2	June-Sept	Violet, rose, white	Excellent ground cover. Stepping stones, Rockery
<i>citriodora</i> (Lemon Thyme).....	4	June	White	Leemon-scented leaves
<i>vulgaris</i> (Thyme).....	12	July	Rosy white	Shrubby, Upright
<i>Tiarella cordifolia</i> (Foamflower) ..	6	April-May	White	Wild. Dainty
<i>Tradescantia virginiana</i> (Spider- wort).....	24	May-Aug.	Blue, white	Wild. Moist places
<i>Trientalis americana</i> (Starflower)	8	May	White	Wild. Diminutive
<i>Trillium cernuum</i> (Nodding T.)...	12	May	White	} Favorite wild flower. Shady woods. Picking blooms destroys pos- sibility of flowers au- other year
<i>erectum</i> (Purple T.).....	18	May	Purple	
<i>grandiflorum</i> (Snow T.).....	8	May	White	
<i>nivale</i> (Dwarf T.).....	8	May	White	
<i>sessile</i> (Toad T.).....	8	May	Purplish red	
<i>undulatum</i> (Painted T.).....	9	May	White, pink center	
<i>Trollius europaeus</i> (Globeflower) ..	24	April - June	Yellow	Very popular
<i>Tunica saxifraga</i> (Tunicflower)...	6	July-Oct.	White, bluish	Rockery. Edging
<i>Tussilago farfara</i> (Coltsfoot).....	8	April	Yellow	Ground cover. Weedy
<i>Uvularia grandiflora</i> (Merrybells)	18	April	Yellow	} Wild shade
<i>perfoliata</i> (Wood M.).....	12	April	Yellow	
<i>sessilifolia</i> (Little M.).....	18	April	Yellow	
<i>Valeriana officinalis</i> (Valerian) ..	36-60	June	Bluish white	Fragrant. Common border
<i>Veratrum viride</i> (False-hellebore)	24	June-July	Greenish	Wild. Broad leaves, deeply veined
<i>Verbascum olympicum</i> (Olympic Mullein).....	60-72	June	Yellow	Biennial. Like an improved wild Mullein
<i>phoeniceum</i> (Purple Mullein) ..	18-48	May-Aug.	Various	Attractive. Uncommon
<i>Vernonia noveboracensis</i> (Iron- weed).....	48-60	Sept.	Purple	Weed in Ohio
<i>Veronica gentianoides</i> (Gentian Speedwell).....	12	June	Light blue	Rockery
<i>incana</i> (Woolly S.).....	12	July-Aug.	Rosy purple	Rockery
<i>longifolia subsessilis</i> (Clump S.)	18	Aug.	Violet	} Rockery
<i>pectinata</i> (Comb S.).....	6	June	Rose	
<i>repens</i> (Creeping S.).....	4	June	Blue	Rockery. Shade
<i>spicata</i> (Spike S.).....	12 +	June +	Purple	Border
<i>spuria</i> (Bastard S.).....	18	June +	Violet	Border
<i>teucrium rupestre</i> (Rock S.)...	4	June	Violet	Rockery. Wall, stepping stones
<i>virginica</i> (Culvers-physic).....	48-60	July	White	Border
<i>Vinca minor</i> (Periwinkle).....	3	May	Violet	Ground cover
<i>Viola blanda</i> (Sweet White Violet)	3	May	White	Tiny. Scented. Common wild
<i>canadensis</i> (Canada V.).....	3-12	May	White	Reverse of petals purple
<i>cornuta</i> (Tufted Pansy).....	6-10	April-Oct.	Various	Unexcelled garden sort
<i>cucullata</i> (Blue March V.).....	6-10	May	Violet	Commonest wild
<i>odorata</i> (Sweet V.).....	6-8	April, Oct.	Violet	Common white wild
<i>palmaria</i> (Palm V.).....	6-8	May	Purple	Cut leaves like common purple
<i>pedata</i> (Birdsfoot V.).....	4	May	Violet and lilac	Rare. Acid soil
<i>pubescens</i> (Downy Yellow V.)...	5-10	May	Yellow	} First sort has leafy stems, other does not
<i>rotundifolia</i> (Roundleaf V.)...	5	May	Yellow	
<i>Yucca filamentosa</i> .....	60	June	White	Evergreen



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